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(FILE 'HOME' ENTERED AT 15:06:12 ON 05 JUN 2000)  
 SET COST OFF  
 SET AUHELP OFF

FILE 'HCAPLUS' ENTERED AT 15:06:20 ON 05 JUN 2000

E AJINOMOTO/PA,CS  
 E AJINOMO/PA,CS  
 L1 6906 S E4-E10  
 E ISHIHARA M/AU  
 L2 432 S E3,E37  
 E YAMANAKA S/AU  
 L3 145 S E3,E4  
 E YAMANAKA SHIG/AU  
 L4 158 S E13

FILE 'REGISTRY' ENTERED AT 15:07:42 ON 05 JUN 2000

L5 1 S CELLULOSE/CN

FILE 'HCAPLUS' ENTERED AT 15:07:50 ON 05 JUN 2000

L6 98 S L5 AND L1-L4  
 L7 229 S ?CELLULOS? AND L1-L4  
 L8 50 S CELLULOS?/SC,SX AND L1-L4  
 L9 247 S L6-L8

FILE 'REGISTRY' ENTERED AT 15:08:22 ON 05 JUN 2000

L10 5699 S 9004-34-6/CRN

FILE 'HCAPLUS' ENTERED AT 15:08:42 ON 05 JUN 2000

L11 69392 S L10  
 L12 44 S L11 AND L1-L4  
 L13 254 S L9,L12  
 L14 90 S L13 AND (?BACTER? OR ?MICROORG? OR MICRO(L)ORGAN?)  
 L15 226 S (A OR ACETOBACT?) () PASTEURIAN?  
 L16 519 S (A OR ACETOBACT?) () ACETI#  
 L17 650 S (A OR ACETOBACT?) () XYLIN?  
 L18 57 S (A OR ACETOBACT?) () RANCEN?  
 L19 44 S (S OR SARCIN?) () VENTRICUL?  
 L20 2 S (B OR BACTER?) () XYLOID?  
 L21 50971 S PSEUDOMON?  
 L22 7779 S AGROBACTER?  
 L23 9622 S RHIZOBI?  
 E ACETOBACTER/CT  
 L24 2159 S E3-E73  
 E SARCIN/CT  
 L25 530 S E4-E21  
 E BACTERIUM/CT  
 L26 4419 S E3-E135  
 E PSEUDOMON/CT  
 L27 36605 S PSEUDOMON?/CT  
 E AGROBACTER/CT  
 L28 4824 S E4-E25  
 E RHIZOBIUM/CT  
 L29 0 S E30E53  
 L30 11 S ATCC23769 OR ATCC(L)23769  
 L31 0 S FERMBP4176 OR FERM(L) (BP4176 OR BP(L)4176)  
 L32 44 S L13 AND L15-L31  
 L33 91 S L14,L32  
 L34 8 S L33 AND MICROFIBRIL?  
 L35 0 S L33 AND MICRO(L) FIBRIL?  
 L36 21632 S CHLORAMPHENICOL?  
 L37 19633 S ?TETRACYCLIN?  
 L38 5928 S PUROMYCIN?  
 L39 10236 S ?ERYTHROMYCIN?

Point of Contact:  
 Jan Delaval  
 Librarian-Physical Sciences  
 CM1 1E01 Tel: 308-4498

L40 784 S ?THIENAMYCIN?  
 L41 3259 S NALIDIXIC ACID  
 L42 0 S PROMIDIC ACID  
 L43 1 S PROMIDIC  
 L44 549 S PIPEMIDIC ACID  
 L45 0 S OXOLINAIC ACID  
 L46 751 S OXOLINIC ACID  
 L47 175 S PIROMIDIC ACID  
 L48 3418 S OFLOXACIN?  
 L49 1035 S ENOXACIN?

FILE 'REGISTRY' ENTERED AT 15:23:32 ON 05 JUN 2000

L50 11 S 56-75-7 OR 60-54-8 OR 53-79-2 OR 114-07-8 OR 59995-64-1 OR 38  
 L51 964 S (56-75-7 OR 60-54-8 OR 53-79-2 OR 114-07-8 OR 59995-64-1 OR 3

FILE 'HCAPLUS' ENTERED AT 15:25:11 ON 05 JUN 2000

L52 29508 S L50, L51  
 L53 1 S L33 AND L36-L49, L52  
 L54 1 S L33 AND ?CELL?(L)DIVI?(L) (INHIBIT? OR BLOCK?)  
 L55 0 S L33 AND ?CELL?(L)DIVI?(L) PREVENT?  
 L56 8 S L53, L54, L34

FILE 'WPIDS' ENTERED AT 15:28:57 ON 05 JUN 2000

E AJINOM/PA  
 L57 6123 S E6-E48  
 E ISHIHARA M/AU  
 L58 196 S E3  
 E YAMANAKA S/AU  
 L59 121 S E3, E4  
 L60 6430 S L57-L59  
 L61 182 S L60 AND ?CELLULOS?  
 L62 11 S L60 AND C08B015/IC, ICM, ICS, ICA, ICI  
 L63 42 S L60 AND C08B037/IC, ICM, ICS, ICA, ICI  
 L64 50 S L62, L63  
 L65 12 S L64 AND ?BACTER?  
 L66 10 S L64 AND (MICROORG? OR MICRO(L)ORGAN?)  
 L67 1 SEA L64 AND (V500 OR V540 OR V570)/M0, M1, M2, M3, M4, M5, M6  
 L68 1 S L64 AND (B04-F10? OR C04-F10? OR B04-B02B OR C04-B02B OR B04-  
 L69 18 S L65-L68  
 L70 6 S L64 AND (PASTEUR? OR ACETI OR XYLIN? OR RANCEN# OR SARCIN? OR  
 L71 19 S L69, L70  
 L72 5 SEA L71 AND (P631/M0, M1, M2, M3, M4, M5, M6 OR (B14-H01B OR  
 C14-H01B OR B12-G07 OR C12-G07)/MC)  
 L73 1 S L71 AND ?CELL?(L)DIVI?(L) (INHIBIT? OR PREVENT? OR BLOCK?)  
 L74 4246 S L36-L49  
 E CHLORAMPHENICOL/DCN  
 E E3+ALL/DCN  
 L75 363 S E2 OR 0112/DRN  
 E CHLORAMPHENICOL/DCN  
 E E4+ALL/DCN  
 L76 25 S E2  
 E TETRACYCLIN/DCN  
 E E4\_ALL/DCN  
 E TETRACYCLIN/DCN  
 E E4+ALL/DCN  
 L77 650 S E2 OR 0210/DRN  
 E TETRACYCLIN/DCN  
 E E5+ALL/DCN  
 L78 62 S E2  
 E TETRACYCLIN/DCN  
 E E6+ALL/DCN  
 L79 70 S E2  
 E PUROMYCIN/DCN  
 E E3+ALL/DCN  
 L80 17 S E2  
 E ERYTHROMYCIN/DCN

L81 580 S E2 OR 0960/DRN  
E ERYTHROMYCIN/DCN  
E E4+ALL/DCN  
L82 66 S E2  
E THIENAMYCIN/DCN  
E E3+ALL/DCN  
L83 3 S E2  
E NALIDIXIC ACID/DCN  
E E3+ALL/DCN  
L84 64 S E2 OR 1243/DRN  
E PIROMIDIC ACID/DCN  
E E3+ALL/DCN  
L85 6 S E2  
E PIPEMIDIC ACID/DCN  
E E3+ALL/DCN  
L86 15 S E2  
E OXOLINIC ACID/CN  
E OXOLINIC ACID/DCN  
E E3+ALL/DCN  
L87 36 S E2 OR 1980/DRN  
E OXOLINIC ACID/DCN  
E E4+ALL/DCN  
L88 8 S E2  
E OFLOXACIN/DCN  
E E3+ALL/DCN  
L89 70 S E2  
E OFLOXACIN/DCN  
E E4+ALL/DCN  
L90 21 S E2  
E OFLOXACIN/DCN  
E E5+ALL/DCN  
L91 1 S E2  
E ENOXACIN/DCN  
E E3+ALL/DCN  
L92 23 S E2  
L93 0 S L64 AND L74-L92  
L94 0 S L72 AND L61,L62  
L95 13 S L71 NOT L72,L73  
L96 8 S L95 AND L61,L62  
L97 5 S L95 NOT L96

FILE 'WPIDS' ENTERED AT 15:49:36 ON 05 JUN 2000  
L98 9 S L73,L96

=> fil wpids

FILE 'WPIDS' ENTERED AT 15:51:29 ON 05 JUN 2000  
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FILE LAST UPDATED: 31 MAY 2000 <20000531/UP>  
>>>UPDATE WEEKS:  
MOST RECENT DERWENT WEEK 200026 <200026/DW>  
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DERWENT WEEK FOR POLYMER INDEXING: 200026  
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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=> d all abeq tech tot 198

L98 ANSWER 1 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1999-040700 [04] WPIDS

DNC C1999-012586

TI Improved **bacterial** cellulose, for e.g. industrial material - contains ribbon-form microfibril of specified size.

DC A11 A96 D13 D16 F01

PA (AJIN) **AJINOMOTO KK**

CYC 1

PI JP 10298204 A 19981110 (199904)\* 10p C08B037-00 <--

ADT JP 10298204 A JP 1997-214065 19970724

PRAI JP 1997-62282 19970228; JP 1996-215332 19960726

IC ICM **C08B037-00**

ICS **C08B015-00**

AB JP 10298204 A UPAB: 19990127

A **bacterial cellulose** contains ribbon-form microfibril of 10-100 nm.in short axis and 160-1000 nm. in long axis.

Also claimed is a method of making **bacterial cellulose** which comprises culturing **bacterial** capable of producing **cellulose** outside the microbial body in a medium contg. **inhibitor of cell division** and separating the **cellulose** produced.

USE - The **bacterial cellulose** is useful for e.g. industrial material, cloth material, medical material or food material.

ADVANTAGE - The **bacterial cellulose** contg. the ribbon-form microfibril has improved physical characteristics, esp. improved modulus of elasticity.

Dwg.0/7

FS CPI

FA AB

MC CPI: A03-A05A; A10-A; A12-S05L; D05-C08; D05-H13; F01-C05; F01-E

L98 ANSWER 2 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1993-392667 [49] WPIDS

DNC C1993-174718

TI Microbial **cellulose** pellet used as a column carrier - has specified particle size and is obt'd. by culturing microbe producing microbial **cellulose** and soluble saccharide(s) gives uniform liq. flow.

DC D16 D17 J04

PA (AJIN) **AJINOMOTO KK**

CYC 1

PI JP 05295001 A 19931109 (199349)\* 8p C08B015-00 <--

ADT JP 05295001 A JP 1992-137487 19920414

PRAI JP 1992-137487 19920414

IC ICM **C08B015-00**

ICS C12P019-04

ICI C12P019-04, C12R001:02

AB JP 05295001 A UPAB: 19940126

Microbial **cellulose** pellet having a particle size of 0.1-2.0mm is new.

The prepn. of a microbial **cellulose** pellet which comprises culturing a microbe producing microbial **cellulose** and soluble saccharides under stirring is also claimed.

USE/ADVANTAGE - The viscosity of the culture can be kept low. The microbial **cellulose** pellet can be used as a column carrier giving a uniform liq. flow.

In an example, **acetobacter pasteurianus** FERM P-12884 was seed cultured in a seed medium contg. 40.0g/l fructose, 50 ml/l corn steep liquor, 3.0 g/l ammonium sulphate, 1.0g g/l KH2PO4, 1.0g/l Mg sulphate heptahydrate, 100 mg/l phytic acid, 15 mg/l ferric ammonium citrate, 15 ml/l Ca chloride, 1 mg/l ammonium molybdate, 2 mg/l ZnSO4.7H2O, 1 mg/l MnSO4.4H2O, 0.02 mg/l CuSO4.5H2O, 0.5 mg/l nicotinic

acid, 0.5 mg/l pyridoxine-HCl, 0.5 mg/l thiamine-HCl, 0.2mg/l Ca pantothenate, 0.2 mg/l riboflavin, 0.02 mg/l folic acid, 0.02 mg/l biotin, 100 mg/l yeast extract and 100 mg/l malt extract at 30 deg.C. for 3-5 days. The seed culture was further cultured in a main medium of the same compsn. as the seed medium at 30 deg.C. for 120 hrs.. 15 g/l of microbial **cellulose** with particle size of 0.1 to 1mm. was obtd..

Dwg.0/0

FS CPI

FA AB

MC CPI: D05-H; J04-A05

L98 ANSWER 3 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1993-113206 [14] WPIDS

DNC C1993-050475

TI Disaggregation of **bacterial cellulose** for paper making, solid food stabiliser, etc. - by applying high speed shear force to dry **bacterially** produced **cellulose**, giving easy washing, transport and storage.

DC A11 D13 D16 D17 F09

PA (AJIN) **AJINOMOTO KK**; (MITY) MITSUBISHI PAPER MILLS LTD

CYC 1

PI JP 05051885 A 19930302 (199314)\* 4p D21B001-30

ADT JP 05051885 A JP 1991-228479 19910815

PRAI JP 1991-228479 19910815

IC ICM D21B001-30

ICS **C08B015-08**; **C08B037-00**; D01F002-00

AB JP 05051885 A UPAB: 19931114

Process comprises disaggregating a dry bacteria cellulose by applying high speed shear force, when disaggregating **bacteria cellulose** produced by **microorganisms**.

USE/ADVANTAGE - Useful for a disaggregation material for paper making, stabiliser for solid food. The method can be utilised for a broad range of raw materials. The disaggregated material has the same binder performance as material obtd. with disaggregating conventional **bacteria cellulose** gel, and washing is easy. The raw material of dry **bacteria cellulose** is easy to transport and preserve

Dwg.0/0

FS CPI

FA AB

MC CPI: A03-A01A; A12-S05L; A12-W06; D03-H01Q; D05-H04; D06-H; F01-A02; F05-A01

L98 ANSWER 4 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1990-205041 [27] WPIDS

DNN N1990-159136 DNC C1990-088724

TI Highly conductive substance - is obtd. by heat-treating **cellulose** produced by microbes, for conductive material, resistor, heater, etc..

DC A11 A85 D16 L03 V01 X12 X25

PA (AJIN) **AJINOMOTO KK**

CYC 1

PI JP 02135609 A 19900524 (199027)\*

ADT JP 02135609 A JP 1988-289690 19881116

PRAI JP 1988-289690 19881116

IC **C08B015-00**; C08J007-00; C08L001-00; C12P019-04; D01F002-00;

H01B001-04

AB JP 02135609 A UPAB: 19930928

Highly conductive substance is obtd. by heat-treatment of **cellulose** produced by microbes. Pref. substance is in form of film, or fibre. Heat-treatment is carried out at temp. of at least 500 deg.C and in an inert gas atmos.

USE/ADVANTAGE - Used for conductive material, resistor, heater, light emitting material, electrode, separator, etc. Substance with high conductivity, stability, and mechanical strength can be prepd. Other substance can be intercalated into substance.

In an example, 50 ml of culture medium comprising sucrose, yeast

extract, (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, KH<sub>2</sub>PO<sub>4</sub> and MgSO<sub>4</sub> . 7H<sub>2</sub>O was placed in flask and sterilised with steam at 120 deg.C for 20 mins. to prepare culture soln. Platinum loop of **acetobacter aceti**-subspecies **xylinum** ATCC 10821, which had been cultivated at 30 deg.C for 3 days on test tube slant agar comprising yeast extract, peptone, and mannitol, was inoculated on culture soln., then cultivated at 30 deg.C for 3 days. Gel film contg. white **cellulose** was formed on culture soln. Film was soaked twice in 0.5N NaOH soln. at 100 deg.C for 1 hr., neutralised, and washed for 24 hrs. Obtd. film was heat-treated at 3000 deg.C in pure Ar flow to obtain graphite film.

0/0

FS CPI EPI

FA AB

MC CPI: A03-A05; A09-A03; A10-E05B; D06-H; L03-A02

EPI: V01-A02; X12-D01C; X25-B01B

L98 ANSWER 5 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1988-273969 [39] WPIDS

DNC C1988-121913

TI Modified **microorganism**-produced **cellulose** for speaker core material - comprises ribbon-like micro-fibril contg. nitrogen and alpha **cellulose**.

DC D16 D17 F09 L03

PA (AGEN) AGENCY OF IND SCI & TECHNOLOGY; (AJIN) **AJINOMOTO KK**;  
(SONY) SONY CORP

CYC 1

PI JP 63199201 A 19880817 (198839)\* 8p

JP 2578333 B2 19970205 (199710) 6p C08B015-00 <--

ADT JP 63199201 A JP 1987-30469 19870212; JP 2578333 B2 JP 1987-30469 19870212

FDT JP 2578333 B2 Previous Publ. JP 63199201

PRAI JP 1987-30469 19870212

IC **C08B015-00**; C12P019-04; D21H005-12

ICM **C08B015-00**

ICS C12P019-04; D21H005-12

AB JP 63199201 A UPAB: 19930923

Substances comprises ribbon like microfibril with N content below 1.5 wt.% and alpha-**cellulose** content above 95 wt.%.

As the **microorganism**, **Acetobacter aceti** subsp. (A) **xylinum** ATCC 10821, **A. pasteurian**, **A. rancens**, **Sarcina ventriculi**, **Bacterium**

**xyloides**, etc. are pref. **Microorganisms** are cultured in a nutrient culture medium contg. C source, N source, inorganic salts, amino acids, vitamins, etc. at 20-40 deg.C and pH 2.5-9 for 1-30 days.

USE/ADVANTAGE - The modified **microorganism**-produced **cellulose** is excellent material for speaker cone, because it has improved sound transmitting speed and strength due to improved modulus of elasticity, etc.

0/0

FS CPI

FA AB

MC CPI: D05-C08; D05-H04; D06-H; F05-A06; F05-A07; L03-H03

L98 ANSWER 6 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1987-300789 [43] WPIDS

DNN N1987-224697 DNC C1987-127975

TI Gel in modified microbially produced **cellulose** - useful for mass culture of prodn. of polypeptide(s) etc., and as medical vulnerary cover.

DC A96 B04 D16 D22 P34

IN ETO, Y; SHIBAI, H; TAKANO, S; WATANABE, K; **YAMANAKA, S**

PA (AJIN) **AJINOMOTO KK**; (AJIN) **AJINOMOTO CO INC**

CYC 5

PI EP 243151 A 19871028 (198743)\* EN 15p

R: DE FR GB

JP 63152601 A 19880625 (198831)

EP 243151 B1 19921216 (199251) EN 20p C12N001-22

R: DE FR GB

DE 3783073 G 19930128 (199305) C12N001-22  
 US 5558861 A 19960924 (199644) 8p A01N063-00  
 JP 2606213 B2 19970430 (199722) 11p C08B015-06 <--

ADT EP 243151 A EP 1987-303507 19870422; JP 63152601 A JP 1987-96141 19870421;  
 EP 243151 B1 EP 1987-303507 19870422; DE 3783073 G DE 1987-3783073  
 19870422, EP 1987-303507 19870422; US 5558861 A Cont of US 1987-39739  
 19870420, Cont of US 1991-653473 19910211, Cont of US 1993-44083 19930406,  
 Cont of US 1993-159708 19931201, Cont of US 1994-281135 19940727, Cont of  
 US 1995-407250 19950320, US 1995-567212 19951205; JP 2606213 B2 JP  
 1987-96141 19870421

FDT DE 3783073 G Based on EP 243151; JP 2606213 B2 Previous Publ. JP 63152601

PRAI JP 1986-92479 19860422; JP 1986-169554 19860718

REP 1.Jnl.Ref; A3...8835; JP 61025481; No.SR.Pub; WO 8602095

IC ICM A01N063-00; C08B015-06; C12N001-22  
 ICS A61F002-10; A61F013-00; A61K009-14; A61K035-36; A61L015-00;  
 A61L015-01; A61L015-16; C08B001-00; C12N001-02; C12N005-06

AB EP 243151 A UPAB: 19930922  
 Gel of microbially produced **cellulose** is new when the  
**cellulose** is modified by (a) physical or chemical bonding to an  
 animal cell adhesive protein; and/or (b) substitn. of the H atoms of at  
 least some of the OH gps. by a positively or negatively charged organic  
 gp. Complex of a gel as defined above with an animal cell bonded to or  
 adsorbed in the gel is also claimed.  
 USE/ADVANTAGE - The complex with animal cells is useful for the mass  
 culture of the cells, esp. in the prodn. of interferon,  
 interleukin-1, plasminogen active oncolytic factor, monoclonal antibodies  
 and other polypeptides. The cells can be cultured to a high density and at  
 a high propagation speed. The gel may be used for wound and burn to give  
 protection and to assist regrowth of the skin, with superior results as a  
 vulnerary cover. It has high adhesion to wounds. It may carry an enzyme,  
**bacteriostat**, **antibacterial** agent, chemotherapeutic  
 agent, coagulant or anticoagulant.  
 0/0

FS CPI GMPI

FA AB

MC CPI: A03-A05; A10-E01; A12-S; A12-V03A; A12-W11L; B02-V03; B04-B02C;  
 B04-B04A3; B04-B04A6; B04-B04C5; B04-B04D3; B04-C01G; B04-C02A;  
 B12-A01; B12-A07; B12-M03; D05-C11; D05-C12; D05-H07; D05-H10

ABEQ EP 243151 B UPAB: 19930922  
 A gel of microbially-produced **cellulose**, characterised in that  
 the microbially-produced **cellulose** is modified by (1) physically  
 or chemically bonding an animal cell adhesive protein to the  
**cellulose**; (2) substituting hydrogen atoms of at least some  
 hydroxyl groups of the **cellulose** with a positively or negatively  
 charged organic group; or (3) substituting hydrogen atoms of at least some  
 hydroxyl groups of the **cellulose** with a positively or negatively  
 charged organic group and further physically or chemically bonding an  
 animal cell adhesive protein to the **cellulose**.  
 0/0

ABEQ US 5558861 A UPAB: 19961104  
 A skin graft or vulnerary cover for external wound surfaces, which  
 comprises a complex of a water-containing gel of modified  
 microbially-produced **cellulose** with human cells bonded to or  
 adsorbed in said gel, said human cells consisting of human epidermal  
 cells, said human epidermal cells being cultured substantially in a  
 monolayer state on the water-containing gel form of the modified  
 microbially-produced **cellulose**, wherein:  
 1) an animal cell adhesive protein is physically or chemically bonded  
 to the modified microbially-produced **cellulose**, or  
 2) said **cellulose** contains hydroxyl groups, wherein at  
 least a portion of the hydrogen atoms of the hydroxyl groups are  
 substituted with a positively or negatively charged group, or  
 3) an animal cell adhesive protein is physically or chemically bonded  
 to the modified microbially-produced **cellulose**, and the  
**cellulose** contains hydroxyl groups, wherein at least a portion of  
 the hydrogen atoms of the hydroxyl groups are substituted with a

positively or negatively charged group,

wherein the positively charged group has the formula  
(CH<sub>2</sub>)<sub>n</sub>-N<sup>+</sup>(R<sub>1</sub>)(R<sub>2</sub>)(R<sub>3</sub>) (I) or (CH<sub>2</sub>)<sub>n</sub>-N(R<sub>1</sub>)(R<sub>2</sub>) (II).

n = 0-8; and

R<sub>1</sub>-R<sub>3</sub> = H or an alkyl, aryl, arylalkyl, alkylaryl, cycloalkyl or alkoxyalkyl;

provided that R<sub>1</sub>- R<sub>3</sub> are not all H; and

where the negatively charged group is carboxy methyl, carboxy ethyl, phosphoric acid group or a sulphuric acid group.

Dwg.0/0

L98 ANSWER 7 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1986-300751 [46] WPIDS

DNC C1986-130220

TI Fine **cellulosic** crystal prepn. - by suspending  
**cellulosic** substance obt'd. from **microorganism** in medium  
of e.g. alkali and metal oxide ammonium liq. and grinding.

DC B07 D13 D21 G02 G03 J04

PA (AGEN) AGENCY OF IND SCI & TECHNOLOGY; (AJIN) **AJINOMOTO KK**

CYC 1

PI JP 61221201 A 19861001 (198646)\* 5p

JP 05080484 B 19931109 (199347) C08B015-08 <--

ADT JP 61221201 A JP 1985-62653 19850327; JP 05080484 B JP 1985-62653 19850327

FDT JP 05080484 B Based on JP 61221201

PRAI JP 1985-62653 19850327

IC **C08B015-08**

ICM **C08B015-08**

AB JP 61221201 A UPAB: 19930922

**Cellulosic** fine crystal prepn. comprises suspending  
**microorganism** produced **cellulosic** substance in a medium  
consisting of one or more of above 1N acid, above 1N alkali, polar solvent  
and metal oxide ammonium liq. and mechanically grinding the suspended  
**cellulosic** substance before or after drying to obtain  
**cellulosic** fine crystal with particle size 0.01-0.1 micron.

The acid is e.g., hydrochloric acid, sulphuric acid, nitric acid,  
formic acid, acetic acid and their combination. Alkali is e.g., caustic  
soda, caustic potassium and their combination. Polar solvent is e.g.,  
dimethyl sulphoxide, formaldehyde, etc. and their combination. Metal oxide  
ammonium liq. is e.g., copper oxide ammonium liq. **Cellulosic**  
substance can be added up to 5% by dry wt. to the medium. Suspending  
operation is carried out usually at room temp. to 100 deg.C for 1 -  
several hrs. Mechanical grinding is carried out using a macerator for  
**cellulose** before drying and a ball-mill after drying.

USE/ADVANTAGE - The **cellulosic** fine crystal is used for  
foods additive, pharmaceuticals, cosmetics and paint, adhesive binder and  
high-strength composite material and chromatography carrier.

0/0

FS CPI

FA AB

MC CPI: B04-C02A; B04-C02F; B12-M11H; C01-C02; C04-C02A; C12-M11B; D03-H;  
D08-B; G02-A02A; G03-B02A; J01-D01A; J04-B01C

ABEQ JP 93080484 B UPAB: 19940111

**Cellulosic** fine crystal prepn. comprises suspending  
**microorganism** produced **cellulosic** substance in a medium  
consisting of one or more of above 1N acid, above 1N alkali, polar solvent  
and metal oxide ammonium liq. and mechanically grinding the suspended  
**cellulosic** substance before or after drying to obtain  
**cellulosic** fine crystal with particle size 0.01-0.1 micron.

The acid is e.g., hydrochloric acid, sulphuric acid, nitric acid,  
formic acid, acetic acid and their combination. Alkali is e.g., caustic  
soda, caustic potassium and their combination. Polar solvent is e.g.,  
dimethyl sulphoxide, formaldehyde, etc. and their combination. Metal oxide  
ammonium liq. is e.g., copper oxide ammonium liq. **Cellulosic**  
substance can be added up to 5% by dry wt. to the medium. Suspending  
operation is carried out usually at room temp. to 100 deg.C for 1 -  
several hrs. Mechanical grinding is carried out using a macerator for



**cellulose** before drying and a ball-mill after drying.

USE/ADVANTAGE - The **cellulosic** fine crystal is used for foods additive, pharmaceuticals, cosmetics and paint, adhesive binder and high-strength composite material and chromatography carrier.  
(J61221201-A)

L98 ANSWER 8 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD  
AN 1986-294559 [45] WPIDS  
DNC C1986-127616  
TI Very small **cellulosic** fine crystal - used as cosmetic or paint assistant food extender adhesive etc..  
DC All A60 B07 D13 D21 G02  
PA (AGEN) AGENCY OF IND SCI TECH; (AJIN) **AJINOMOTO KK**; (AGEN) AGENCY OF IND SCI & TECHNOLOGY  
CYC 1  
PI JP 61215635 A 19860925 (198645)\* 4p  
JP 05027653 B 19930421 (199319) 3p C08L001-02  
ADT JP 61215635 A JP 1985-58803 19850322; JP 05027653 B JP 1985-58803 19850322  
FDT JP 05027653 B Based on JP 61215635  
PRAI JP 1985-58803 19850322  
IC A61K007-00; A61K047-00; **C08B015-08**; C08L001-02; C09J003-04; C12P019-04  
ICM C08L001-02  
ICS **C08B015-08**; C08J003-12; C09J003-04; C12P019-04  
ICA A61K007-00; A61K047-38; C09D007-12; C09D201-00; C09J101-02  
AB JP 61215635 A UPAB: 19930922  
**Cellulosic** fine crystal with particle size 0.01 micrometer - 0.1 micrometer.

USE/ADVANTAGE - The **cellulosic** fine crystal is very hydrophilic and give excellent suspension in soln. It has constant form and large surface area per unit wt. It gives smooth feeling to skin when used as assistant to pharmaceuticals, cosmetics, etc. Paints contg. it as assistant can be coated uniformly to form a thin coating. It is used as adhesive for hydrophilic substance. It can be used as extender for ice cream to give smooth taste. It is impregnated into hydrophobic polymer (e.g. unsatd. polyester resin, epoxy resin, etc.), hydrophilic polymer (e.g. polyvinyl alcohol, etc.) and/or inorganic material (e.g. alumina, titanium oxide, etc.) to strengthen them. Its acetic acid deriv. can be used as deodorant. It is used as it is or deriv. for chromatography carrier to improve sepn.

In an example 2N or 3N caustic soda soln. of 0.5-5 wt.% as dry **cellulosic** substance produced by **microorganisms** is settled at 5-100 deg.C for 1 min - several hrs. with or without stirring. Alkali is removed with acid or water washing. Then, it is bleached with sodium hypochlorite. Finally it is crushed mechanically before or after drying using a pulp-macerator or ball-mill respectively.

O/O

FS CPI

FA AB

MC CPI: A03-A05; A12-S; B04-C02A1; B12-M11H; D03-E08; D08-B09; G02-A02A; G02-A05; G03-B02A

ABEQ JP 93027653 B UPAB: 19931113

**Cellulosic** fine crystal with particle size 0.01 micrometre - 0.1 micrometre.

USE/ADVANTAGE - The **cellulosic** fine crystal is very hydrophilic and give good suspension in soln.. It has constant form and large surface area per unit wt.. It gives smooth feeling to skin when used as assistant to pharmaceuticals, cosmetics, etc.. Paints contg. it as assistant can be coated uniformly to form a thin coating. It is used as adhesive for hydrophilic substance. It can be used as extender for ice cream to give smooth taste. It is impregnated into hydrophobic polymer (e.g. unsatd. polyester resin, epoxy resin, etc.), hydrophilic polymer (e.g. PVA, etc.) and/or inorganic material (e.g. alumina, titanium oxide, etc.) to strengthen them. Its acetic acid deriv. can be used as deodorant. It is used as it is or deriv. for chromatography carrier to improve sepn..

In an example, 2N or 3N caustic soda soln. of 0.5-5 wt.% as dry

**cellulosic** substance produced by **microorganisms** is settled at 5-100 deg.C for 1 minute to several hrs. opt. with stirring. Alkali is removed with acid or water washing. Then, it is bleached with sodium hypochlorite. Finally, it is crushed mechanically before or after drying using a pulp-macerator or ball-mill respectively. (J61215635-A)

L98 ANSWER 9 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD  
AN 1986-179891 [28] WPIDS  
DNC C1986-077457  
TI **Cellulosic** dissociated prodn. prodn. - by applying mechanical shearing force to **cellulosic** gel produced by **microorganisms**.  
DC D16 G02  
PA (AGEN) AGENCY OF IND SCI & TECHNOLOGY; (AJIN) **AJINOMOTO KK**  
CYC 1  
PI JP 61113601 A 19860531 (198628)\* 3p  
JP 04064521 B 19921015 (199246) 3p C08B015-00 <--  
ADT JP 61113601 A JP 1984-234437 19841107; JP 04064521 B JP 1984-234437 19841107  
FDT JP 04064521 B Based on JP 61113601  
PRAI JP 1984-234437 19841107  
IC ICM **C08B015-00**  
ICS A23L001-03  
ICA C12P019-04; D21B001-30  
ICI C12P019-04, C12R001:02  
AB JP 61113601 A UPAB: 19930922  
Fine ribbon-like **cellulosic** dissociated prod. has excellent dispersibility in aq. system. It consists of microfibril in which elemental fibrils are arranged in parallel in a plane.  
Prodn. of the dissociated **cellulosic** prod. comprises applying mechanical shearing force to gel-like **cellulosic** substance produced by **microorganisms** as such or in the form of a mixt. with water, aq. soln. or hydrophilic solvent. As the **microorganism**, **Acetobacter** acetic subsp. **xylinum** is cited. Shearing force can be applied easily by using a dissociator, mixer, etc.  
USE/ADVANTAGE - The prod. has excellent water dispersibility and water retention compared with the conventional **cellulosic** substance. It is used to maintain the viscosity of foods, cosmetics, paints, etc. and improve the stability of foods and as low calorie additive or emulsion stabilising additive, etc.  
O/O  
FS CPI  
FA AB  
MC CPI: D05-C08; D06-H; G02-A03

=> fil hcaplus

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=> d all hitstr tot 156

L56 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2000 ACS  
 AN 2000:108908 HCAPLUS  
 DN 132:193270  
 TI **Bacterial cellulose** - a masterpiece of Nature's arts  
 AU Iguchi, M.; Yamanaka, S.; Budhiono, A.  
 CS Bogor Research Station for Rubber Technology, Bogor, 16151, Indonesia  
 SO J. Mater. Sci. (2000), 35(2), 261-270  
 CODEN: JMTSAS; ISSN: 0022-2461  
 PB Kluwer Academic Publishers  
 DT Journal; General Review  
 LA English  
 CC 16-0 (Fermentation and Bioindustrial Chemistry)  
 Section cross-reference(s): 6, 10, 17  
 AB A review with 41 refs. Ever since its remarkable mech. properties were found fifteen years ago, interest has grown in **bacterial cellulose** for which the use had been more or less limited to the manuf. of nata-de-coco, an indigenous food of Southeast Asia. This paper reviews the progress of relevant studies, including the prodn. of **cellulose** by **bacteria**, the formation of **microfibrils** and gel layer, the properties of gel and processed sheets, and some aspects of applications.  
 ST review **bacteria cellulose** manuf  
 IT **Bacteria (Eubacteria)**  
 Fermentation  
 (bacterial cellulose: prodn., properties and applications)  
 IT 9004-34-6P, **Cellulose**, biological studies  
 RL: BMF (Bioindustrial manufacture); BOC (Biological occurrence); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)  
 (bacterial cellulose: prodn., properties and applications)  
 RE.CNT 41  
 RE  
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- IT 9004-34-6P, Cellulose, biological studies  
RL: BMF (Bioindustrial manufacture); BOC (Biological occurrence); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)  
(bacterial cellulose: prodn., properties and applications)
- RN 9004-34-6 HCAPLUS  
CN Cellulose (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

- L56 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2000 ACS  
AN 1999:163087 HCAPLUS  
DN 130:335073  
TI Crystalline features of **bacterial cellulose** altered by chemical agents during biosynthesis  
AU Abe, Kazunori; Sugiyama, Junji; Itoh, Takao; Ishihara, Masaru; Yamanaka, Shigeru  
CS Laboratory of Cell Structure and Function, Japan  
SO Wood Res. (1998), 85, 66-67  
CODEN: WDRSAU; ISSN: 0372-719X  
PB Kyoto University, Wood Research Institute  
DT Journal  
LA English  
CC 10-1 (Microbial, Algal, and Fungal Biochemistry)  
AB Changes in the morphol. of **cellulose microfibrils** induced in **Acetobacter aceti** by chem. agents known the elongate or shorten the **bacterial** cell were investigated by electron microscopy after mild homogenization of the **bacterial** mat. The width of the ribbon-shaped **microfibril** increased as the cell length increased. The relative crystallinity, uniplanar orientation, and the fractional ratio of I.alpha. from FT-IR spectroscopy tented to increase in relation to the increase of cell length, suggesting that chem. treatment affected the aggregation of subfibrils to a higher-order structure.
- ST **bacteria cellulose microfibril** morphol chem modification; **cryst cellulose microfibril** chem modification **bacteria**
- IT **Acetobacter aceti**  
Crystallinity  
**Microfibril**  
(cryst. features of **bacterial cellulose** altered by

ref 5-18

chem. agents during biosynthesis)  
 IT 9004-34-6, Cellulose, properties  
 RL: PRP (Properties)  
 (microfibrils; cryst. features of bacterial  
 cellulose altered by chem. agents during biosynthesis)

RE.CNT 2

RE

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 (2) Sugiyama, J; Macromolecules 1991, V24, P4168 HCAPLUS

IT 9004-34-6, Cellulose, properties  
 RL: PRP (Properties)  
 (microfibrils; cryst. features of bacterial  
 cellulose altered by chem. agents during biosynthesis)

RN 9004-34-6 HCAPLUS

CN Cellulose (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L56 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2000 ACS

AN 1998:735148 HCAPLUS

DN 130:39984

TI Bacterial cellulose with ribbon-like  
 microfibril shape

IN Ishihara, Masaru; Yamanaka, Shigeru

PA Ajinomoto Co., Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08B037-00

ICS C08B015-00

CC 43-3 (Cellulose, Lignin, Paper, and Other Wood Products)

Section cross-reference(s): 16

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10298204	A2	19981110	JP 1997-214065	19970724
	US 6060289	A	20000509	US 1997-900124	19970725

PRAI JP 1996-215332 19960726

JP 1997-62282 19970228

AB The cellulose having short axis 10-100 nm and long axis 160-1000  
 nm is produced extracellularly by cellulose-generating  
 bacteria, e.g., Acetobacter pasteurianus, in a  
 culture contg. cell division inhibitor,  
 e.g., nalidixic acid, or org. reducing agent.

ST Acetobacter cellulose ribbon like microfibril  
 ; bacterial cellulose culture cell  
 division inhibitor; morphol ribbon like  
 microfibril bacterial cellulose;  
 extracellular ribbon like microfibril bacterial  
 cellulose

IT Acetobacter pasteurianus  
 (bacterial cellulose with ribbon-like  
 microfibril shape)

IT Fermentation

Reducing agents

(in culture for manuf. of bacterial cellulose with  
 ribbon-like microfibril shape)

IT Cell division

(inhibitor for; in culture for manuf. of bacterial  
 cellulose with ribbon-like microfibril shape)

IT 9004-34-6P, Cellulose, properties

RL: BMF (Bioindustrial manufacture); PRP (Properties); BIOL (Biological  
 study); PREP (Preparation)

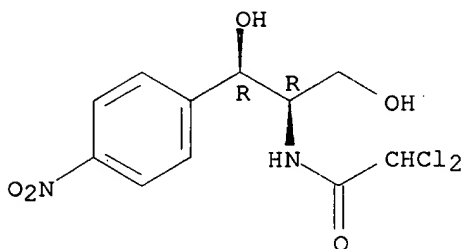
(bacterial cellulose with ribbon-like  
 microfibril shape)

IT 56-75-7, Chloramphenicol 389-08-2,  
 Nalidixic acid 3483-12-3, Dithiothreitol  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (in culture for manuf. of bacterial cellulose with  
 ribbon-like microfibril shape)  
 IT 9004-34-6P, Cellulose, properties  
 RL: BMF (Bioindustrial manufacture); PRP (Properties); BIOL (Biological  
 study); PREP (Preparation)  
 (bacterial cellulose with ribbon-like  
 microfibril shape)  
 RN 9004-34-6 HCAPLUS  
 CN Cellulose (8CI, 9CI) (CA INDEX NAME)

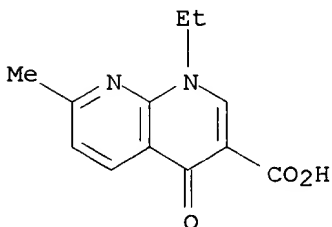
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 56-75-7, Chloramphenicol 389-08-2,  
 Nalidixic acid  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (in culture for manuf. of bacterial cellulose with  
 ribbon-like microfibril shape)  
 RN 56-75-7 HCAPLUS  
 CN Acetamide, 2,2-dichloro-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)-2-(4-  
 nitrophenyl)ethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 389-08-2 HCAPLUS  
 CN 1,8-Naphthyridine-3-carboxylic acid, 1-ethyl-1,4-dihydro-7-methyl-4-oxo-  
 (8CI, 9CI) (CA INDEX NAME)



L56 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1993:253549 HCAPLUS  
 DN 118:253549  
 TI Bacterial cellulose. III. Development of a new form of  
 cellulose  
 AU Okiyama, Atsushi; Motoki, Masao; Yamanaka, Shigeru  
 CS Food Res. Dev. Lab., Ajinomoto Co., Inc., Kawasaki, 210, Japan  
 SO Food Hydrocolloids (1993), 6(6), 493-501  
 CODEN: FOHYES; ISSN: 0268-005X  
 DT Journal  
 LA English  
 CC 17-2 (Food and Feed Chemistry)  
 AB A new form of cellulose, bacterial cellulose  
 (BC), was developed by disintegrating gelatinous cellulose which

was produced by **Acetobacter aceti** AJ12368. BC is wet (97% water) and paste-like, and comprised of flocks of **microfibrils**. It swells in water and disperses homogeneously at a level of  $\approx 0.3\%$ . The suspension is a thixotropic fluid, and also shows dilatant flow at a low shear rate. The viscosity of a BC suspension is low compared to common thickeners. As a filler, BC has the highest water-holding capacity among com. **cellulose** products. BC is considered as a stabilizer with low viscosity and a low-calorie material as a fat substitute.

ST **Acetobacter cellulose** manuf thickening agent; fat substitute **bacterial cellulose**; **bacterial cellulose** manuf thickener fat substitute  
 IT Thickening agents  
 IT Fat substitutes  
     (**bacterial cellulose** manuf. as)  
 IT **Acetobacter aceti**  
     (**cellulose** from, manuf. and properties of, as food additive)  
 IT Food functional properties  
     (of **bacterial cellulose**)  
 IT Food functional properties  
     (swelling, of **bacterial cellulose**)  
 IT Food functional properties  
     (viscosity, of **bacterial cellulose**)  
 IT Food functional properties  
     (water binding, of **bacterial cellulose**)  
 IT **9004-34-6P, Cellulose**, preparation  
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
     (manuf. and properties of, of **Acetobacter aceti**)  
 IT **9004-34-6P, Cellulose**, preparation  
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
     (manuf. and properties of, of **Acetobacter aceti**)  
 RN 9004-34-6 HCAPLUS  
 CN Cellulose (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L56 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1992:108558 HCAPLUS  
 DN 116:108558  
 TI Preparation of high-strength materials from **bacterial cellulose**  
 AU Iguchi, Masatoshi; **Yamanaka, Shigeru**; Watanabe, Kunihiro; Nishi, Yoshio; Uryu, Masaru  
 CS Res. Inst. Polym. Text., Tsukuba, 305, Japan  
 SO Integr. Fundam. Polym. Sci. Technol.--5, [Proc. Int. Meet. Polym. Sci. Technol., Rolduc Polym. Meet.--5], 5th (1991), Meeting Date 1990, 371-9.  
 Editor(s): Lemstra, P. J.; Kleintjens, L. A. Publisher: 44-50, London, UK.  
 CODEN: 57HAAD  
 DT Conference  
 LA English  
 CC 43-3 (**Cellulose**, Lignin, Paper, and Other Wood Products)  
 AB A pellicle of **bacterial cellulose** gave a strong sheet, the Young's modulus being as high as 30 GPa across the plane. Such good mech. properties originated in the unique fibrillar morphol. in which **microfibrils** are lightly bound by interfibrillar H bonds. The sheets had good acoustic characteristics when applied to manufg. diaphragms of practical models. The raw material was also processed into a pulp which was useful for making strong papers and reinforcing ordinary pulp papers and mats of other fibrous materials.  
 ST **bacteria cellulose** pulp paper strength  
 IT **Bacteria**  
     (**cellulose** pulp from, for high-strength sheets)  
 IT Pulp, **cellulose**  
     (from **bacteria**, for high-strength sheets)  
 IT Sheet materials  
     (high-strength, from **bacterial cellulose** pulp)

IT Paper  
 (high-strength, from **cellulose** pulp from **bacteria**)  
 IT Mechanical property  
 (of sheets from **bacterial cellulose** pulp)  
 IT **9004-34-6**  
 RL: USES (Uses)  
 (pulp, from **bacteria**, for high-strength sheets)  
 IT **9004-34-6**  
 RL: USES (Uses)  
 (pulp, from **bacteria**, for high-strength sheets)  
 RN 9004-34-6 HCAPLUS  
 CN Cellulose (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L56 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1988:633003 HCAPLUS  
 DN 109:233003  
 TI Modulus-enhanced **bacteria** generated **cellulose** and  
 manufacture  
 IN Iguchi, Masatoshi; Mihashi, Shigenobu; **Yamanaka, Shigeru**;  
 Watanabe, Kunihiro; Kitamura, Nobuyoshi; Nishi, Mio; Uriyu, Masaru  
 PA Agency of Industrial Sciences and Technology, Japan; **Ajinomoto**  
 Co., Inc.; Sony Corp.  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08B015-00  
 ICS C12P019-04; D21H005-12  
 CC 43-3 (**Cellulose**, Lignin, Paper, and Other Wood Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63199201	A2	19880817	JP 1987-30469	19870212
	JP 2578333	B2	19970205		
AB	Elastic title <b>cellulose</b> with high strength and sound-transmission speed, useful in speaker cones, etc., was manufd. having total N content .ltoreq.1.5%, and .alpha.- <b>cellulose</b> content .ltoreq.95%, and consisted of ribbon-like <b>microfibrils</b> . Pressing <b>bacteria</b> ( <i>Acetobacter aceti</i> subsp xylinum, ATCC 1084 strain) generated <b>cellulose</b> between metal plates at 130.degree. prepd. a film which was impregnated with 4% aq. NaOH at 20.degree. for 3 h, washed, repressed, and dried to give a modified <b>cellulose</b> (Kjeldahl N content 0.31%, .alpha.- <b>cellulose</b> content 98.4%) film showing modulus 21.5 GPa and sound transmission speed 3860 m-s-1, vs. 15.0, and 3410, resp., without the NaOH treatment.				
ST	<b>bacteria cellulose</b> elasticity improved; alkali impregnation <b>bacteria cellulose</b> ; sound transmission <b>bacteria cellulose</b>				
IT	Bleaching agents (purifn. with, of <b>bacteria</b> generated <b>cellulose</b> , for improved toughness)				
IT	Alkali metal hydroxides RL: USES (Uses) (purifn. with, of <b>bacteria</b> generated <b>cellulose</b> , for improved toughness)				
IT	<b>9004-34-6, Cellulose</b> , uses and miscellaneous RL: USES (Uses) (modification of <b>bacteria</b> generated, for improved toughness)				
IT	1310-73-2P, Sodium hydroxide, preparation 7681-52-9P RL: PREP (Preparation) (purifn. with, of <b>bacteria</b> generated <b>cellulose</b> , for improved toughness)				
IT	<b>9004-34-6, Cellulose</b> , uses and miscellaneous RL: USES (Uses)				



(modification of **bacteria** generated, for improved toughness)

RN 9004-34-6 HCAPLUS

CN Cellulose (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L56 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2000 ACS

AN 1987:51997 HCAPLUS

DN 106:51997

TI Molded material comprising **bacteria**-produced **cellulose**

IN Iguchi, Masatoshi; Mitsushashi, Shigenobu; Ichimura, Kunihiro; Nishi, Yoshio; Uryu, Masaru; **Yamanaka, Shigeru**; Watanabe, Kunihiro

PA Agency of Industrial Sciences and Technology, Japan; Sony Corp. ; **Ajinomoto Co., Inc.**

SO Eur. Pat. Appl., 36 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C08L001-02

ICS G10K013-00; D21H001-00

CC 43-3 (**Cellulose**, Lignin, Paper, and Other Wood Products)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 200409	A2	19861105	EP 1986-302755	19860414
	EP 200409	A3	19880309		
	EP 200409	B1	19940629		
	R: DE, FR, GB				
	JP 62036467	A2	19870217	JP 1986-85021	19860415
	JP 08032798	B4	19960329		
	US 4742164	A	19880503	US 1986-852838	19860416
	JP 08035155	A2	19960206	JP 1995-98542	19950424
	JP 08049188	A2	19960220	JP 1995-98541	19950424
PRAI	JP 1985-79291		19850416		
	JP 1985-122818		19850607		
	JP 1986-85021		19860415		

AB **Bacteria**-produced **cellulose** (I) comprising ribbon-like **microfibrils**, is useful as a component of molded materials having high dynamic strength, modulus of elasticity, and expansion strength. A sterilized medium comprising sucrose, yeast ext. (Difco), KH<sub>2</sub>PO<sub>4</sub>, and MgSO<sub>4</sub>·7H<sub>2</sub>O was inoculated with **Acetobacter aceti** xylinum ATCC10821 and grown at 30.degree. for 30 days in agar medium to give a gel-like membrane contg. white **bacteria**-produced I. The gel-like membrane was washed, pressed, and dried to give a sheet (10-m thick) having modulus of elasticity 15.8 GPa, compared with 1.5 GPa for cellophane.

ST **bacteria** produced **cellulose** molded material;  
**Acetobacter** produced **cellulose microfibril**;  
 elasticity modulus **bacteria** produced **cellulose**

IT Membranes  
 (acoustic, **bacteria**-produced **cellulose** in)

IT **Acetobacter pasteurianus**  
 (**cellulose** produced by, with increased elastic modulus and stretch resistance)

IT Paper  
 (contg. **bacteria**-produced **cellulose microfibrils**, for diaphragms)

IT Papier-mache  
 (manuf. of, **bacteria**-produced **cellulose** in, stretch-resistant)

IT Acoustic devices  
 (speakers, cone paper for, **bacteria**-produced **cellulose**-contg., with improved fidelity)

IT 9004-34-6, **Cellulose**, uses and miscellaneous  
 (**bacteria**-produced, **microfibrils**, for molded

materials, elastic and stretch-resistant)

IT 409-21-2, Silicon carbide, uses and miscellaneous 12033-89-5, Silicon nitride, uses and miscellaneous  
(paper contg. **bacteria-produced cellulose** and, with improved elasticity)

IT 7440-50-8, Copper, uses and miscellaneous  
(powd., paper contg. **bacteria-produced cellulose** and, with increased strength and elasticity)

IT 9004-34-6, **Cellulose**, uses and miscellaneous  
(**bacteria-produced, microfibrils**, for molded materials, elastic and stretch-resistant)

RN 9004-34-6 HCAPLUS

CN Cellulose (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L56 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2000 ACS

AN 1985:554948 HCAPLUS

DN 105:154948

TI Manufacture of fibrillated **microorganism-forming** materials

IN Iguchi, Masatoshi; Mihashi, Shigenobu; **Yamanaka, Shigeru**; Watanabe, Kunihiro

PA Ajinomoto Co., Inc., Japan; Agency of Industrial Sciences and Technology

SO Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08B015-00  
ICS A23L001-03; A23L001-308

ICA C12P019-04; D21B001-34

CC 43-3 (**Cellulose**, Lignin, Paper, and Other Wood Products)  
Section cross-reference(s): 17, 62

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61113601	A2	19860531	JP 1984-234437	19841107
	JP 04064521	B4	19921015		

AB **Cellulosic microfibrils** for food and cosmetics are prepd. by mech. shearing aq. suspensions contg. a **microorganism** forming **cellulosic** material to give **microfibrils** with increased water retention and water dispersibility. Thus, an aq. suspension contg. an **Acetobacter acetic** subsp xylinum-forming **cellulosic** material was centrifuged in a tube for 15 min and dried to give **microfibrils**. The water retention of this **microfibril** was 2100%, compared with 40% for a **microfibrils** obtained from **cellulose** pulp.

ST **cellulosic microfibril** water retention;  
**microorganism** forming **cellulose** fibrillation

IT 9004-34-6, uses and miscellaneous  
RL: USES (Uses)  
(**microorganism-forming**, fibrillation of, with increased water retention)

IT 9004-34-6, uses and miscellaneous  
RL: USES (Uses)  
(**microorganism-forming**, fibrillation of, with increased water retention)

RN 9004-34-6 HCAPLUS

CN Cellulose (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

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FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 31 May 2000 (20000531/ED)

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FILE 'BIOSIS' ENTERED AT 15:55:45 ON 05 JUN 2000

L102 20607 S L5 OR L10  
L103 53840 S ?CELLULOS?  
L104 54899 S L102,L103  
L105 112088 S L15-L23  
L106 5 S L30,L31  
L107 2140735 S BACTERIA+ALL/BC  
L108 2140735 S MICROORGANISMS+ALL/BC  
L109 109684 S L105 AND L106-L108  
L110 3418 S L109 AND L36-L49,L50,L51  
L111 3 S L110 AND L5  
L112 7 S L110 AND CELLULOS?  
L113 7 S L111,L112  
L114 3 S L113 AND (ELECTROPOR? OR STREPTOMYC? OR BANDAGE)

FILE 'BIOSIS' ENTERED AT 16:05:45 ON 05 JUN 2000

=> d all tot l114

L114 ANSWER 1 OF 3 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1993:73805 BIOSIS

DN PREV199395038305

TI Transformation of *Acetobacter xylinum* with plasmid DNA  
by electroporation.

AU Hall, Pamela E.; Anderson, Steven M.; Johnston, David M.; Cannon, Robert  
E. (1)

CS (1) Dep. Biology, Univ. N.C., Greensboro, N.C. 27412 USA

SO Plasmid, (1992) Vol. 28, No. 3, pp. 194-200.

ISSN: 0147-619X.

DT Article

LA English

AB Genetic analysis of *Acetobacter xylinum*, a  
cellulose-synthesizing bacterium, has been limited by lack of a  
successful transformation method. Transformation of *A.*  
*xylinum* was attempted using two broad-host-range plasmids (pUCD2  
and pRK248) and a variety of transformation methods. Methods using CaCl<sub>2</sub>,  
freeze/thaw treatments, and polyethylene glycol were unsuccessful.  
Transformation of a cellulose-negative strain of *A.*  
*xylinum* with plasmids DNA has been achieved with high-voltage  
electroporation. Electroporation conditions of 25  $\mu$ F  
capacitance, 2.5 kV, 400 ohms resistance, and pulse lengths of 6-8 ms were  
applied to a cell/DNA mixture in a 0.2-cm cuvette. Plasmid pUCD2  
transformed at an efficiency of 10<sup>-6</sup>-10<sup>-7</sup> transformants/ $\mu$ g DNA and  
pRK248 yielded 10<sup>-5</sup> transformants/ $\mu$ g DNA. The frequency of  
transformation increased linearly with increasing DNA concentration, while  
transformation efficiency remained constant. pUCD2 was recovered from  
transformants following chloramphenicol amplification and  
observed by agarose gel electrophoresis. Both plasmids could be reisolated  
from *Escherichia coli* after back-transformations with alkaline lysis DNA

preparations from *Acetobacter* transformants. Electro-transformation of *A. xylinum* with plasmid DNA suggests its potential use for analysis of the *A. xylinum* genome.

CC Biochemical Methods - Nucleic Acids, Purines and Pyrimidines \*10052  
 Biochemical Methods - Carbohydrates \*10058  
 Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
 Biochemical Studies - Carbohydrates 10068  
 Biophysics - General Biophysical Techniques \*10504  
 Metabolism - Carbohydrates 13004  
 Physiology and Biochemistry of Bacteria 31000  
 Genetics of Bacteria and Viruses \*31500  
 Microbiological Apparatus, Methods and Media \*32000  
 Food and Industrial Microbiology - Biosynthesis, Bioassay and Fermentation \*39007

BC **Acetobacteraceae** 06501  
**Enterobacteriaceae** \*06702

IT Major Concepts  
 Bioprocess Engineering; Genetics; Methods and Techniques

IT Chemicals & Biochemicals  
**CELLULOSE**

IT Miscellaneous Descriptors  
**CELLULOSE** PRODUCER; DNA TRANSFER METHOD; PLASMID PRK248;  
 PLASMID PUCD2

ORGN Super Taxa  
 Acetobacteraceae: Eubacteria, Bacteria; Enterobacteriaceae: Eubacteria, Bacteria

ORGN Organism Name  
**Acetobacter xylinum** (Acetobacteraceae); *Escherichia coli* (Enterobacteriaceae)

ORGN Organism Superterms  
 bacteria; eubacteria; microorganisms

RN 9004-34-6 (**CELLULOSE**)

L114 ANSWER 2 OF 3 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1977:176216 BIOSIS

DN BA63:71080

TI ISOLATION AND CHARACTERIZATION OF 2 STRAINS OF **STREPTOMYCES** ABLE TO METABOLIZE NATURAL POLY SACCHARIDES INCLUDING MANNAN.

AU CHARPENTIER M; PERCHERON F

SO ANN MICROBIOL (PARIS), (1976 (RECD 1977)) 127B (3), 363-372.  
 CODEN: ANMBCM. ISSN: 0300-5410.

FS BA; OLD

LA Unavailable

AB Two strains of aerobic and mesophilic microorganisms were isolated from palm-tree plantation sand. They grew on the insoluble polysaccharides mannan, **cellulose** and chitin as the only C source. This lytic activity was used for the purification of the 2 strains. The morphology of the organisms and the presence of LL-diaminopimelic acid in their cell-wall are characteristic of the genus **Streptomyces**. Their specific polysaccharidase activity toward insoluble and natural .beta.- and .alpha.-glycans (mannan, **cellulose**, chitin, pectin and starch) and the formation of soluble saccharides (mannobiose, cellobiose, .beta.-D-N-acetylglucosamine, galacturonic acid and maltose) were characterized. Antagonistic or synergetic effect on pathogenic bacteria [*Staphylococcus aureus*, *Klebsiella pneumoniae* and **Pseudomonas aeruginosa**] and certain phytopathogenic microorganisms was exhibited; only in the latter case was a weak lytic activity exerted by the 3 **Streptomyces** isolates, but 1 strain stimulated *Colletotrichum lindemuthianum* and *Phialophora cinerescens*. The 2 strains were sensitive to **tetracycline** and **streptomycin**, but they were resistant to gentamicin, kanamycin, **erythromycin** and .beta.-lactam antibiotics (penicillin and cephalosporin); they possessed a .beta.-lactamase bound to the cell membrane.

CC Biochemistry - Gases 10012  
 Biochemical Methods - Proteins, Peptides and Amino Acids 10054  
 Biochemical Studies - General 10060

- Biochemical Studies - Proteins, Peptides and Amino Acids 10064  
 Biochemical Studies - Carbohydrates 10068  
 Biophysics - Membrane Phenomena \*10508  
 Enzymes - Methods 10804  
 Enzymes - Physiological Studies \*10808  
 Metabolism - General Metabolism; Metabolic Pathways \*13002  
 Metabolism - Energy and Respiratory Metabolism \*13003  
 Metabolism - Carbohydrates \*13004  
 Pharmacology - General 22002  
 Morphology and Cytology of Bacteria \*30500  
 Physiology and Biochemistry of Bacteria \*31000  
 Microbiological Apparatus, Methods and Media 32000  
 Medical and Clinical Microbiology - Bacteriology 36002  
 Chemotherapy - Antibacterial Agents 38504  
 Soil Microbiology 40000  
 Horticulture - Tropical and Subtropical Fruits and Nuts; Plantation Crops 53004  
 Phytopathology - Diseases Caused by Fungi 54502
- BC **Actinomycetales** 06200  
**Eubacteriales** 07200  
**Fungi Imperfecti or Deuteromycetes** 15500  
 Palmae 25380
- IT Miscellaneous Descriptors  
 STAPHYLOCOCCUS-AUREUS KLEBSIELLA-PNEUMONIAE **PSEUDOMONAS**  
 -AERUGINOSA COLLETOTRICHUM-LINDEMUTHIANUM PHIALOPHORA-CINERESCENS PALM  
 TREE PLANTATION SAND DI AMINO PIMELIC-ACID **TETRACYCLINE**  
**STREPTOMYCIN** GENTAMICIN KANAMYCIN **ERYTHROMYCIN**  
 PENICILLIN CEPHALOSPORIN ANTI INFECT-DRUGS BETA LACTAMASE
- RN 57-92-1 (**STREPTOMYCIN**)  
 60-54-8 (**TETRACYCLINE**)  
 114-07-8 (**ERYTHROMYCIN**)  
 583-93-7 (DI AMINO PIMELIC-ACID)  
 1403-66-3 (GENTAMICIN)  
 1406-05-9 (PENICILLIN)  
 8063-07-8 (KANAMYCIN)  
 9073-60-3 (BETA LACTAMASE)  
 11111-12-9 (CEPHALOSPORIN)  
 9036-88-8Q, 51395-96-1Q (MANNAN)
- L114 ANSWER 3 OF 3 BIOSIS COPYRIGHT 2000 BIOSIS  
 AN 1976:229113 BIOSIS  
 DN BA62:59113  
 TI ANTI BACTERIAL PROPERTIES OF A NEW NONWOVEN **BANDAGE** BIOCEL-NFA  
 NITRO FURAN.  
 AU TUROVETS I H; MIKHNOVS'KA N D; BABYKA A V; FEDOROVA L H; KUTSENOK V A  
 SO MIKROBIOL ZH (KIEV), (1975) 37 (2), 228-231.  
 CODEN: MZUKAV. ISSN: 0026-3664.  
 FS BA; OLD  
 LA Unavailable  
 AB Biocel-NFA consists of cotton or bleached wood **cellulose** and a  
 new type of chemically modified fiber treated with 5-nitrofurantoin  
 preparations. Biocel-NFA had a bactericidal effect on Staphylococcus  
 aureus 209 and 1, Bacterium [Escherichia] coli, Proteus vulgaris,  
**Pseudomonas pyocyaneus** (aeruginosa) and Clostridium perfringens,  
 all isolated from postoperative (human) patients. Biocel-NFA was also more  
 effective against gram-negative and -positive bacteria than levomycetin,  
**erythromycin**, **tetracycline**, **chlortetracycline**  
 and monocylin.
- CC Biochemical Studies - General 10060  
 Biochemical Studies - Carbohydrates 10068  
 Anatomy and Histology, General and Comparative - Surgery 11105  
 Pathology, General and Miscellaneous - Therapy \*12512  
 Pharmacology - General \*22002  
 Physiology and Biochemistry of Bacteria 31000  
 Microbiological Apparatus, Methods and Media 32000  
 Medical and Clinical Microbiology - General; Methods and Techniques 36001

Medical and Clinical Microbiology - Bacteriology \*36002  
Chemotherapy - Antibacterial Agents \*38504  
Plant Physiology, Biochemistry and Biophysics - Chemical Constituents  
51522  
Forestry and Forest Products 53500  
BC **Bacteria - Unspecified 06000**  
**Eubacteriales 07200**  
**Pseudomonadales 08200**  
Spermatophyta 25000  
Malvaceae 26330  
Hominidae 86215  
IT Miscellaneous Descriptors  
STAPHYLOCOCCUS-AUREUS ESCHERICHIA-COLI PROTEUS-VULGARIS  
PSEUDOMONAS-AERUGINOSA CLOSTRIDIUM-PERFRINGENS HUMAN BACTERIA  
COTTON WOOD CELLULOSE LEVOMYCETIN ERYTHROMYCIN  
TETRACYCLINE MONOMYCIN ANTI INFECT-DRUGS  
RN 56-75-7 (LEVOMYCETIN)  
60-54-8 (TETRACYCLINE)  
114-07-8 (ERYTHROMYCIN)  
9004-34-6 (CELLULOSE)  
54597-56-7 (MONOMYCIN)  
59-87-0Q, 609-39-2Q, 27194-24-7Q (NITROFURAN)

=> d his l115-

(FILE 'BIOSIS' ENTERED AT 16:05:45 ON 05 JUN 2000)

FILE 'HCAPLUS' ENTERED AT 16:06:05 ON 05 JUN 2000

E RHIZOB/CT  
L115 7346 S E4-E58  
L116 15051 S (L5 OR L10 OR ?CELLULOS? OR CELLULOS?/SC,SX) AND (?BACTER? OR  
L117 198 S L116 AND L36-L49,L52  
L118 17 S L116 AND ?CELL?(L)DIVI?(L) (INHIBIT? OR BLOCK? OR PREVENT?)  
L119 214 S L117,L118  
L120 2 S L119 AND (MICROFIBRIL? OR MICRO(L) FIBRIL?)  
L121 9 S L119 AND 43/SC,SX  
L122 9 S L120,L121 NOT L56  
L123 7024 S L5 (L) (PREP/RL OR BMF/RL OR IMF/RL)  
L124 2 S L123 AND L119  
L125 2 S L5/P AND L119  
L126 0 S L124,L125 AND L122  
L127 1 S L124,L125 NOT L56  
L128 17 S L119 AND 16/SC,SX  
L129 15 S L128 NOT L56,L122,L125  
L130 2 S L129 AND (BROTH OR TEXTILE)/TI

=> fil hcaplus

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FILE COVERS 1967 - 5 Jun 2000 VOL 132 ISS 24

FILE LAST UPDATED: 4 Jun 2000 (20000604/ED)

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=> d all hitstr tot 1130

L130 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2000 ACS

AN 1996:449705 HCAPLUS

DN 125:84810

TI Fermentation **broth** composition

IN Mathias, Rolland; Akira, Fujikawa

PA Daicel Chemical Industries, Ltd., Japan

SO Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C12N001-02

ICS C12N001-38

CC 16-1 (Fermentation and Bioindustrial Chemistry)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 718399	A1	19960626	EP 1994-402983	19941221
	R: AT, DE, ES, FR, GB, IT, NL, PT				
	JP 08224077	A2	19960903	JP 1995-331595	19951220
PRAI	EP 1994-402983		19941221		

AB A fermented broth compn. contg. a biodegradable filamentous org. substance having an av. fiber diam. of 0.7-10 .mu.m and a filamentous actinomyces is claimed. By sepg. and purifying this fermented broth, the target substance is obtained. Filtration can be effected at an extremely high efficiency without using a filter aid. The filtration residue is composed mainly of harmless org. materials and thus reusable as fertilizers, feeds, etc. When the filtration residue is incinerated, only a small amt. of ash is formed, which reduces the load on the incinerator.

ST actinomycete fermn **cellulose** fiber filtration; fungi filamentous fermn **cellulose** fiber filtration; mycelium fermn **cellulose** fiber filtration

IT Actinomycetes

Cephalosporium acremonium

Ergot

Fermentation

Filtration

Penicillium notatum

Saccharopolyspora erythraea

Streptomyces aureofaciens

(**cellulose** fibers in fermns. with filamentous

**microorganisms** to improve broth filtration)

IT Ergot

(Claviceps purpurea, **cellulose** fibers in fermns. with

filamentous **microorganisms** to improve broth filtration)

IT Alkaloids, preparation

RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(ergotaman, **cellulose** fibers in fermns. with filamentous

**microorganisms** to improve broth filtration)

IT Fungi

(filamentous, **cellulose** fibers in fermns. with filamentous

**microorganisms** to improve broth filtration)

IT 60-54-8P, Tetracycline 61-24-5P, Cephalosporin C

61-33-6P, Penicillin G, preparation 114-07-8P,

**Erythromycin** 511-09-1P, Ergokryptine

RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(cellulose fibers in fermns. with filamentous microorganisms to improve broth filtration)

IT 9004-34-6, Cellulose, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(cellulose fibers in fermns. with filamentous microorganisms to improve broth filtration)

IT 60-54-8P, Tetracycline 114-07-8P,

**Erythromycin**

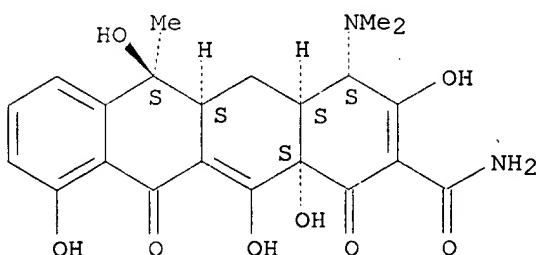
RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(cellulose fibers in fermns. with filamentous microorganisms to improve broth filtration)

RN 60-54-8 HCAPLUS

CN 2-Naphthacenecarboxamide, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,6,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo-, (4S,4aS,5aS,6S,12aS)-(9CI) (CA INDEX NAME)

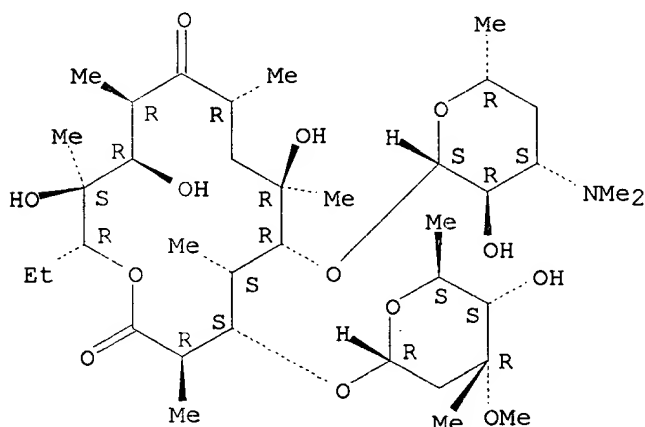
Absolute stereochemistry.



RN 114-07-8 HCAPLUS

CN Erythromycin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 9004-34-6, Cellulose, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(cellulose fibers in fermns. with filamentous microorganisms to improve broth filtration)

RN 9004-34-6 HCAPLUS

CN Cellulose (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*



L130 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2000 ACS

AN 1990:177004 HCAPLUS

DN 112:177004

TI Immobilization of **microorganisms** on **textiles** for use  
in repeated batch fermentation

IN Yamazaki, Hiroshi; Joshi, Sushama

PA Can.

SO U.S., 8 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM C12P035-06

ICS C12P017-18; C12P007-14; C12N011-02

NCL 435049000

CC 16-1 (Fermentation and Bioindustrial Chemistry)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4898817	A	19900206	US 1986-874388	19860616
	CA 1267858	A1	19900417	CA 1985-494718	19851106
PRAI	CA 1985-494718		19851106		

AB **Microorganisms** immobilized on cloth supports (e.g. cotton, cellulose acetate) by adsorption are used for batch fermn. procedures. This simplifies the recovery of the fermn. liquor from the fermn. vessel by filtration. The cloth retained in the fermn. vessel can then be resuspended in new fermn. medium without the need to generate new starter cultures. Several types of cloth were tested with several types of **microorganism**. Cotton proved to be the best support for all of the **microorganisms** tested. *Saccharomyces cerevisiae* immobilized on cotton were used to ferment starch or Jerusalem artichoke tuber hydrolyzates (both .apprx.10% fermentable hexoses) to EtOH at 30.degree. in a stirred-tank fermentor (250 mL) at a stirring rate that ensured an adequate supply of nutrients to the immobilized yeast without dislodging cells from the cloth. For both substrates the productivity was 20 g ethanol/fermentor/h. The time to 90% conversion of fermentable sugars was 4 h for artichoke hydrolyzate and 6 h for starch.

ST cloth immobilized **microorganism** fermn; *Saccharomyces* cotton  
immobilization ethanol fermn

IT Fermentation

(immobilization of **microorganisms** for, adsorption into cloth  
for)

IT *Bacillus amyloliquefaciens**Bacillus megaterium**Bacillus subtilis***Brevibacterium ammoniagenes****Corynebacterium glutamicum***Escherichia coli**Kluyveromyces fragilis**Kluyveromyces marxianus***Microorganism****Rhizobium meliloti***Saccharomyces diastaticus**Saccharomyces uvarum**Schwanniomyces alluvius**Streptomyces cattleya**Streptomyces clavuligerus**Streptomyces olivochromogenes*

Yeast

(immobilized on textiles, fermn. using)

IT Acetate fibers, biological studies

Polyester fibers, uses and miscellaneous

(**microorganism** immobilization on, fermn. using)

IT Textiles

(**microorganisms** immobilized on, fermn. using)

IT Immobilization, biochemical

(of **microorganisms** on textiles for batch fermn.)

IT Textiles  
(cotton, **microorganism** immobilization on, fermn. using)

IT Acetate fibers, biological studies  
(triacetate, **microorganism** immobilization on, fermn. using)

IT 9004-35-7  
(acetate fibers, **microorganism** immobilization on, fermn. using)

IT 9004-35-7  
(acetate fibers, triacetate, **microorganism** immobilization on, fermn. using)

IT 64-17-5P, Ethanol, preparation  
RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)  
(manuf. of, with cloth-immobilized Kluyveromyces or Saccharomyces)

IT 59995-64-1P, **Thienamycin**  
RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)  
(manuf. of, with cloth-immobilized Streptomyces cattleya)

IT 61-24-5P, Cephalosporin C  
RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)  
(manuf. of, with cloth-immobilized Streptomyces clavuligerus)

IT 9004-35-7  
(acetate fibers, **microorganism** immobilization on, fermn. using)

RN 9004-35-7 HCAPLUS

CN Cellulose, acetate (9CI) (CA INDEX NAME)

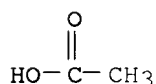
CM 1

CRN 9004-34-6  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 64-19-7  
CMF C2 H4 O2



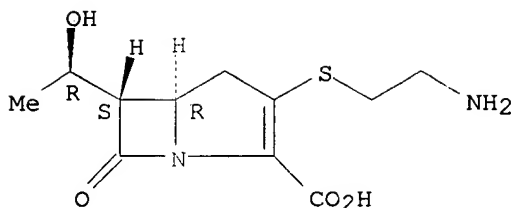
(acetate fibers, triacetate, **microorganism** immobilization on, fermn. using)

IT 59995-64-1P, **Thienamycin**  
RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)  
(manuf. of, with cloth-immobilized Streptomyces cattleya)

RN 59995-64-1 HCAPLUS

CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(2-aminoethyl)thio]-6-[(1R)-1-hydroxyethyl]-7-oxo-, (5R,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> fil wpids

FILE 'WPIDS' ENTERED AT 16:30:20 ON 05 JUN 2000  
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FILE LAST UPDATED: 31 MAY 2000 <20000531/UP>  
>>>UPDATE WEEKS:  
MOST RECENT DERWENT WEEK 200026 <200026/DW>  
DERWENT WEEK FOR CHEMICAL CODING: 200026  
DERWENT WEEK FOR POLYMER INDEXING: 200026  
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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=> d his l131-

(FILE 'HCAPLUS' ENTERED AT 16:06:05 ON 05 JUN 2000)

FILE 'HCAPLUS' ENTERED AT 16:20:05 ON 05 JUN 2000

FILE 'WPIDS' ENTERED AT 16:20:22 ON 05 JUN 2000

L131 1182 S C08B015/IC,ICM,ICS,ICA,ICI  
L132 2 S L131 AND L74-L92  
L133 56 S L131 AND ?CELL? (L) (INHIBIT? OR BLOCK? OR PREVENT?)  
L134 15 S L131 AND (V00# OR V02# OR V03# OR V04# OR V05# OR V06# OR V07  
L135 72 S L132-L134  
L136 9 S L135 AND ?BACTER?  
L137 3 SEA L135 AND (V500 OR V540 OR V570)/M0,M1,M2,M3,M4,M5,M6  
L138 0 S L135 AND (B04-F10? OR C04-F10? OR B04-B02B OR C04-B02B OR B04  
L139 11 S L136,L137  
L140 2 S L135 AND (MICROFIBRIL? OR MICRO(L)FIBRIL?)  
L141 2 S L135 AND (MICROFIBR? OR MICROFIBER? OR MICRO(L) (FIBR? OR FIBE  
L142 10 S L139-L141 NOT L98  
L143 4 S L142 AND (OLIGOPEPTIDE OR PYROGEN OR FORTIMYCIN OR AGAROSE)/T  
L144 6 S L142 NOT L143

FILE 'WPIDS' ENTERED AT 16:30:20 ON 05 JUN 2000

=> d all abeq tech tot

L144 ANSWER 1 OF 6 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD  
AN 1998-399069 [34] WPIDS  
DNC C1998-120910

TI Treatment of gelatinous **bacterial** cellulose to obtain soft dietary fibre - by treating to bring into **microfibre** form, and then heat treating.

DC A11 A97 D13

IN TAMMARATE, P

PA (SCHU-I) SCHULZE H K; (THRE-N) THAILAND RES FUND

CYC 80

PI WO 9830594 A1 19980716 (199834)\* EN 21p C08B015-00 <--

RW: AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA  
PT SD SE SZ UG ZW

W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE  
GH HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN  
MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN  
YU ZW

AU 9854684 A 19980803 (199850) C08B015-00 <--

US 5962676 A 19991005 (199948) C08B015-00 <--

ADT WO 9830594 A1 WO 1998-AU9 19980112; AU 9854684 A AU 1998-54684 19980112;  
US 5962676 A US 1997-782735 19970113

FDT AU 9854684 A Based on WO 9830594

PRAI US 1997-782735 19970113

IC ICM C08B015-00

ICS A23L001-054; D21C005-00

AB WO 9830594 A UPAB: 19980826

Gelatinous **bacterial** cellulose (I) is treated by: (a) treating to bring it into **micro-fibre** form (II); and (b) heating (II) (i) to soften the material and then substantially evaporate any remaining water, or (ii) at above 100 deg. C to modify (II) and **inhibit** hardening of the resultant dried product.

USE - Product is of use as a dietary **microfibre** that is not digested in the gastrointestinal tract.

ADVANTAGE - When (I) is dried it often tends to become hard and horn-like, limiting its use; it is now found that the hardening is not as previously thought a property of the microstructure of the **cellulose** itself; the heating of step (b) **inhibits** hydrogen bonding and denatures **micro-fibril** bonds, and provides a softer product having good swelling property. Washing procedures also remove substances that cause hardening

Dwg. 0/0

FS CPI

FA AB

MC CPI: A03-A05; A10-E05; A12-W09; D03-H01T1

L144 ANSWER 2 OF 6 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1995-248047 [33] WPIDS

CR 1997-506086 [47]

DNC C1995-113731

TI New alkali treated bagasse used as livestock feed - is prepd. by softening a bagasse using calcium oxide.

DC C04 D13 D16 D17 P14

IN CHAEN, H; IRITANI, S; MITSUHASHI, M; MIYAKE, T

PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU

CYC 8

PI GB 2285806 A 19950726 (199533)\* 35p C08B015-00 <--

AU 9455057 A 19950713 (199535) A23K001-12

NZ 250858 A 19950828 (199540) A23K001-14

BR 9405265 A 19950801 (199544) C12P007-14

JP 07231754 A 19950905 (199544) 9p A23K001-175

ZA 9410118 A 19951129 (199601) 33p A01K000-00

US 5545418 A 19960813 (199638) 8p A23K001-12

US 5622859 A 19970422 (199722) 8p A01N063-00

CN 1109280 A 19951004 (199734) C13D001-02

GB 2285806 B 19980429 (199819) C08B015-00 <--

AU 689088 B 19980326 (199826) A23K001-12

ADT GB 2285806 A GB 1994-25675 19941220; AU 9455057 A AU 1994-55057 19940211;  
NZ 250858 A NZ 1994-250858 19940210; BR 9405265 A BR 1994-5265 19941227;  
JP 07231754 A JP 1994-336885 19941227; ZA 9410118 A ZA 1994-10118

19941220; US 5545418 A US 1994-364489 19941227; US 5622859 A Cont of US 1994-364489 19941227, US 1996-623007 19960328; CN 1109280 A CN 1994-113455 19941226; GB 2285806 B GB 1994-25675 19941220; AU 689088 B AU 1994-55057 19940211

FDT US 5622859 A Cont of US 5545418; AU 689088 B Previous Publ. AU 9455057

PRAI JP 1993-346818 19931227

IC ICM A01K000-00; A01N063-00; A23K001-12; A23K001-14; A23K001-175; C08B015-00; C12P007-14; C13D001-02

ICS A23B007-10; A23B007-157; A23K001-00; A23K003-03; A23L001-48; A23L003-3463; C05F005-00; C08H005-04; C12N001-00; C12N001-12; C12N001-22; C12R001-01; C12S003-02; C12S003-04; D21B001-38; D21H011-12; D21H011-16; D21H011-20

ICA C12N001-20

ICI C12R001:01, C12R001:225, C12R001:23, C12R001:24, C12R001:25, C12R001:26; C12R001:01, C12R001:225, C12R001:23, C12R001:24, C12R001:25, C12R001:

AB GB 2285806 A UPAB: 19971125

Alkali-treated bagasse (ATB) opt. contg. a nutrient source, prepd. by softening a bagasse while **preventing** decomposition of **cellulose** and **hemicellulose** is new. Also claimed are: (a) a process for softening bagasse comprising incorporating CaO into a bagasse opt. with NaOH under the coexistence of water, while **preventing** decomposition of **cellulose** and **hemicellulose**; (b) a fermented bagasse feed obtd. by incorporating a nutrient source (NS) and a seed culture of a lactic acid **bacterium** into the ATB and fermenting; and (c) Enterococcus faecium HL-S (FERM BP4504) **bacterium** capable of proliferating in an alkaline nutrient culture medium of pH at least 9.5.

USE - Bagasse is a squeezed waste of sugar cane contg. **cellulose** (CE) and **hemicellulose** (HC). It has been utilised in part as a fuel source. ATB is useful as an animal feed for livestock pref. ruminants such as cattle or monogastric animals such as pigs or poultry. It is also used as an organic fertiliser.

ADVANTAGE - The ATB feed has good taste and is of high quality. It is produced easily within a relatively short period of time. The ATB saves sugar refineries from the difficulties of treating bagasse which was previously considered as an unutilised industrial waste, and livestock farming industries from the shortage of roughage. The prepn. of ATB establishes a novel technology to save environmental disruption, an overflowing population and a food crisis by allowing prodn. of feeds for livestock and milk prods. from bagasse without any competition without foods. Previously bagasse could not be used as an animal feed due to the high lignin content.

Dwg.0/0

FS CPI GHPI

FA AB

MC CPI: C04-A10J; C14-E11; C14-S12; D03-G04; D05-A04A; D05-H04; D06-A; D06-H

ABEQ US 5545418 A UPAB: 19960924

An alkali-treated bagasse, which is prepd. by softening a bagasse with calcium oxide or with a mixt. of calcium oxide and sodium hydroxide while **preventing** the substantial decomposition of **cellulose** and **hemicellulose**.

Dwg.0/0

ABEQ US 5622859 A UPAB: 19970530

A biologically pure Enterococcus faecium FERM BP-4504, which is a **bacterium** capable of proliferating in an alkaline nutrient culture medium having a pH not less than 9.5.

Dwg.0/0

ABEQ GB 2285806 B UPAB: 19980512

Alkali-treated bagasse (ATB) opt. contg. a nutrient source, prepd. by softening a bagasse while **preventing** decomposition of **cellulose** and **hemicellulose** is new. Also claimed are: (a) a process for softening bagasse comprising incorporating CaO into a bagasse opt. with NaOH under the coexistence of water, while **preventing** decomposition of **cellulose** and **hemicellulose**; (b) a fermented bagasse feed obtd. by incorporating a nutrient source (NS) and a seed culture of a lactic acid

**bacterium** into the ATB and fermenting; and (c) *Enterococcus faecium* HL-S (FERM BP4504) **bacterium** capable of proliferating in an alkaline nutrient culture medium of pH at least 9.5.

USE - Bagasse is a squeezed waste of sugar cane contg. **cellulose** (CE) and **hemicellulose** (HC). It has been utilised in part as a fuel source. ATB is useful as an animal feed for livestock pref. ruminants such as cattle or monogastric animals such as pigs or poultry. It is also used as an organic fertiliser.

ADVANTAGE - The ATB feed has good taste and is of high quality. It is produced easily within a relatively short period of time. The ATB saves sugar refineries from the difficulties of treating bagasse which was previously considered as an unutilised industrial waste, and livestock farming industries from the shortage of roughage. The prepn. of ATB establishes a novel technology to save environmental disruption, an overflowing population and a food crisis by allowing prodn. of feeds for livestock and milk prods. from bagasse without any competition without foods. Previously bagasse could not be used as an animal feed due to the high lignin content.

Dwg. 0/0

L144 ANSWER 3 OF 6 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD  
 AN 1994-169894 [21] WPIDS  
 CR 1995-216784 [29]  
 DNC C1994-077641  
 TI Prodn. of saccharide carboxylic acid by oxidising sugar with *Pseudo-gluconobacter* - including new cpds. useful as sweeteners, clathrating agents for drugs, anticancer agents, etc. of good water solubility and stability against enzymes.  
 DC B03 B04 B05 C03 D13 D16 D21 E13  
 IN ISHIGURO, T; NOGAMI, I; OKA, M; YAMAGUCHI, T; NAKAGAWA, Y; UDA, Y; YAMAUCHI, T  
 PA (TAKE) TAKEDA CHEM IND LTD; (TAKE) TAKEDA PHARM IND CO LTD  
 CYC 25  
 PI EP 599646 A2 19940601 (199421)\* EN 44p C12P019-02  
 R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE  
 AU 9351948 A 19940630 (199430) C07H007-033  
 CA 2110111 A 19940528 (199431) C12P019-00  
 NZ 250284 A 19940927 (199438) C12P019-00  
 JP 07076594 A 19950320 (199520) 28p C07H007-033  
 US 5434061 A 19950718 (199534) 30p C12P019-22  
 EP 599646 A3 19950419 (199545) C12P019-02  
 AU 666234 B 19960201 (199612) C07H007-033  
 TW 293036 A 19961211 (199714) C07H013-02  
 CN 1093407 A 19941012 (199717) C12P007-58  
 US 5629411 A 19970513 (199725) 17p C07H015-24  
 US 5635610 A 19970603 (199728) 29p C07H003-00  
 US 5635611 A 19970603 (199728) 29p C07H003-00  
 SG 48777 A1 19980518 (199834) C12P019-02  
 US 5840881 A 19981124 (199903) C08B037-16  
 PH 30166 A 19970121 (199953) C12P019-00  
 ADT EP 599646 A2 EP 1993-309412 19931125; AU 9351948 A AU 1993-51948 19931125; CA 2110111 A CA 1993-2110111 19931126; NZ 250284 A NZ 1993-250284 19931125; JP 07076594 A JP 1993-288284 19931117; US 5434061 A US 1993-152122 19931115; EP 599646 A3 EP 1993-309412 19931125; AU 666234 B AU 1993-51948 19931125; TW 293036 A TW 1993-109415 19931110; CN 1093407 A CN 1993-114961 19931126; US 5629411 A Div ex US 1993-152122 19931115, US 1995-419393 19950410; US 5635610 A Div ex US 1993-152122 19931115, US 1995-419394 19950410; US 5635611 A Div ex US 1993-152122 19931115, US 1995-419397 19950410; SG 48777 A1 SG 1996-1582 19931125; US 5840881 A CIP of US 1993-152122 19931115, CIP of US 1994-353326 19941205, US 1995-437227 19950508; PH 30166 A PH 1993-47325 19931126  
 FDT AU 666234 B Previous Publ. AU 9351948; US 5629411 A Div ex US 5434061; US 5635610 A Div ex US 5434061; US 5635611 A Div ex US 5434061; US 5840881 A CIP of US 5434061  
 PRAI JP 1993-173121 19930713; JP 1992-318807 19921127; JP 1993-50652 19930311; JP 1993-305597 19931206

REP No-SR.Pub; EP 150085; EP 221707; EP 295861; EP 51707

IC ICM C07H003-00; C07H007-033; C07H013-02; C07H015-24; C08B037-16;  
C12P007-58; C12P019-00; C12P019-02; C12P019-22

ICS A61K033-26; C07H005-00; C07H013-12; C07H015-00; C07H015-12;  
C07H015-22; C07H015-256; C07H017-04; C07H019-04; C07J017-00;  
**C08B015-02**; C08B031-16; C08B031-18; C08B037-00; C08B037-02;  
C12N001-20; C12P019-04; C12P019-12; C12P019-14; C12P019-56;  
C12R001-01

ICA A23L001-236; A61K031-70

ICI C12P019-00, C12R001:01; C12P019-00, C12R001:01; C12P019-00, C12R001:01;  
C12P019-00, C12R001:01; C12P019-56, C12R001:01

AB EP 599646AN 2 UPAB: 19991215  
Prodn. of saccharide carboxylic acid (A), or its salts, comprises treating a hydroxymethyl and/or hemiacetal OH-contg. monosaccharide deriv., oligo- or poly-saccharide (or derivs.) with a **Pseudogluconobacter** microorganism (or derived cell preparation) able to oxidise hydroxymethyl and/or hemiacetal OH-attached C to COOH.  
Also new are (1) (A) produced by oxidising at least 1 CH<sub>2</sub>OH gp. of palatinose; D-trehalose; maltosyl-beta- cyclodextrin; 2-O-alpha-D-glucopyranosyl-L-ascorbic acid, streptozotocin; heptulose; maltodextrins (I); steviol glycosides (II); validamycin A; mogroside or dextran (including complexes of the acid with a metal salt) or by oxidn. of at least 1 hemiacetal OH-attached C (including complexes of the acid with a metal salt) and (2) prodn. of dextranyl-glucuronic acid-Fe hydroxide complex (III) by reacting dextranyl glucuronic acid with Fe hydroxide sol.  
R1 = beta-Glc-2-beta-Glc; beta-Glc(3-beta-Glc)-2-beta-Glc;  
beta-Glc-2-alpha-Rha; beta-Glc or -beta-Glc(3-beta-Glc)-2-alpha-Rha; R2 = beta-Glc or beta-Glc-2-beta-Glc.  
USE/ADVANTAGE - (III), and similar Fe derivs. of dextran carboxylic acid, are useful in Fe supplementation (anti-anaemics) in animals. (A) derived from stevioside glycosides and some other sugars are intense sweeteners (useful in low calorie foods, beverages, etc. and for improving palatability of drugs); those from maltosyl beta-cyclodextrins from clathrates of good water solubility with e.g. prostaglandins, salts of some (A) with Ca, Mg and Fe can be used to improve absorption of these ions (e.g. for **preventing** osteoporosis); (A) from trehalose are humectants and stabilisers for antibodies; those from D-glucosamine are high moisture retention cosmetic bases, those from nucleosides are flavourings; those from streptozotocin are anticancer and antimicrobial agents; those from Validamycin are agricultural fungicides and those from ascorbic acid are antioxidants. P. saccharoketogenes oxidises a wide range of substrates to (A) with good yield and selectivity. Compared with the sugar starting materials (A) have better solubility, lower toxicity and better resistance to enzymes. They also have good disintegratability and biodegradation.  
Dwg.0/14

FS CPI

FA AB; DCN

MC CPI: B02-V; C02-V; B03-F; C03-F; B04-C02; C04-C02; B04-C02C; C04-C02C;  
D03-G01; D03-H01G; D03-H01P; D03-H01T3; D05-C02; D05-C09; D05-H11;  
D08-B10; E05-L02A; E07-A02H

ABEQ US 5434061 A UPAB: 19950904  
Prodn. of carbohydrate carboxylic acids and their salts comprises propagation of a **Pseudogluconobacter** saccharoketogenes strain in a nutrient medium contg. a monosaccharide, oligosaccharide or polysaccharide contg. a CH<sub>2</sub>OH gp., and/or a corresp. hemiacetal; and recovery of the carboxylic acid produced. Or a cell prepn. from the above species is used to oxidise the sugar or its hemiacetal.  
USE - The prods. are carbohydrate carboxylic acids having improved solubility in water and resistance to enzymic degradation, and serve as carriers for nutritional or medicinal metal derivs., sweetening aids and flavour additives.  
ADVANTAGE - The process is selective, giving high yields of sugar carboxylic acids.  
Dwg.0/14

ABEQ US 5629411 A UPAB: 19970619

A saccharide carboxylic acid such that at least one hydroxymethyl group of a steviol glycoside of formula (II) wherein R1 = -beta-Glc-2-beta-Glc, -beta-Glc(3-beta-glycine)-2-beta-Glc, -beta-Glc-2-alpha-Rha, -beta-Glc(3-beta-Glc)-2-alpha-Rha or -beta-Glc; and R2 = -beta-Glc or -beta-Glc-2-beta-Glc

has been oxidized to carboxyl group or a salt thereof.

Dwg.0/14

ABEQ US 5635610 A UPAB: 19970709

A saccharide carboxylic acid such that at least one hydroxymethyl group of palatinose has been oxidized to carboxyl group or a salt is new.

Dwg.0/14

ABEQ US 5635611 A UPAB: 19970709

A saccharide carboxylic acid such that at least one hydroxymethyl group of dextran has been oxidized to carboxyl group or a salt thereof.

Dwg.0/14

L144 ANSWER 4 OF 6 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1990-312265 [41] WPIDS

CR 1990-253424 [33]; 1990-282151 [37]; 1991-294954 [40]; 1992-016071 [02]; 1992-064939 [08]; 1992-131876 [16]; 1994-150903 [18]

DNN N1992-012156 DNC C1990-135096

TI Super-absorber compsn. which gels and crosslinks on hydration - comprising carboxylic acid, branched complex carbohydrate, and crosslinking agent.

DC A96 B07 D22 F07 P32 P34

IN WALLACH, D F H; CHANG, A

PA (MICR-N) MICRO VESICULAR SYS; (MICR-N) MICRO VESICULAR SYSTEMS INC; (MICR-N) MICRO VESICULAR SYSTEMS INC

CYC 19

PI US 4959341 A 19900925 (199041)\*

AU 9052676 A 19901009 (199102)

AU 9052841 A 19901009 (199102)

ZA 9001853 A 19910828 (199139)

EP 462178 A 19911227 (199201)

R: AT BE CH DE ES FR GB IT LI LU

BR 9007210 A 19920218 (199212)

BR 9007212 A 19920324 (199217)

EP 462178 B1 19931006 (199340) EN 7p B01J013-00

R: AT BE CH DE DK ES FR GB IT LI LU NL SE

DE 69003810 E 19931111 (199346) B01J013-00

CA 2049055 C 19940705 (199431) C09K003-00

JP 07020547 B2 19950308 (199514) 4p B01J020-24

ADT US 4959341 A US 1989-320944 19890309; ZA 9001853 A ZA 1990-1853 19900309;

EP 462178 A EP 1990-904542 19900308; EP 462178 B1 EP 1990-904542 19900308,

WO 1990-US1049 19900308; DE 69003810 E DE 1990-603810 19900308, EP

1990-904542 19900308, WO 1990-US1049 19900308; CA 2049055 C CA

1990-2049055 19900308; JP 07020547 B2 JP 1990-504607 19900308, WO

1990-US1049 19900308

FDT EP 462178 B1 Based on WO 9010495; DE 69003810 E Based on EP 462178, Based

on WO 9010495; JP 07020547 B2 Based on JP 04504978, Based on WO 9010495

PRAI US 1989-320944 19890309

REP CA 1152483; US 3969280; US 4090013; US 4160063; US 4454055; US 4486335; US

4548847; US 4610678; US 4786415; US 4812486; US 4826880; 1.Jnl.Ref; EP

273141; EP 309309

IC A61F013-15; A61K000-00; B01D015-00; B01J013-00; B01J020-22; B01N020-26;

B29C000-00; C07C000-00; C08B000-00; C09K003-00

ICM B01J013-00; B01J020-24; C09K003-00

ICS A61F013-15; A61K000-00; A61L015-60; B01D015-00; B01J020-22;

B01J020-26; B01N020-26; B29C000-00; C07C000-00; C08B000-00

ICA C08B011-12; C08B015-10

AB US 4959341 A UPAB: 19960610

Synthetic sponge compsn. comprises a non-hydrated mixt. of (a) a carboxylic acid (I) with a substantial hydrophobic region; (b) a branched complex carbohydrate (II); and (c) a separate cross-linking agent (III).

The compsn. can be hydrated and cross-linked simultaneously in the presence of a hydrating soln..

USE/ADVANTAGE - The superabsorber, which gels and cross-links as it



hydrates, is completely biodegradable and non-toxic. The compsns. are useful as wound dressings and diapers, etc.; and may also act as carriers or sustained released delivery systems for drugs, and as materials for the entrapment of particulates such as erythrocytes and protein mols etc..  
 @ (6pp DWg.No.0/0)

FS CFI GMPI

FA AB; DCN

MC CPI: A08-D01; A08-D05; A09-A; A12-V01; A12-V03A; B04-B04A6; B04-B04D1; B04-C02A2; B04-C02E3; B12-M02D; B12-M10A; D09-C03; D09-C04B; D09-C06; F04-C01

ABEQ EP 462178 B UPAB: 19931129

A method of making a particulate absorbent material comprising the steps of: (A) reacting a carboxylated cellulosic material with (i) a crosslinking agent, and (ii) a hydrophobicity agent; (B) separating the reaction product; and (C) removing water from said reaction product until it is substantially dehydrated and a particulate is formed of said absorbent material.  
 Dwg.0/0

L144 ANSWER 5 OF 6 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1989-341376 [47] WPIDS

CR 1994-287140 [36]

DNN N1990-045579 DNC C1989-151267

TI New carboxymethyl polysaccharide ester(s) - used in pharmaceutical, biomedical, food and other industries.

DC A96 A97 B07 D13 D16 D21 D22 G03 P32 P34

IN DELLA VALLE, F; ROMEO, A

PA (FIDI-N) FIDIA SPA; (FIDI-N) FIDIA FARM ITAL DER

CYC 22

PI EP 342557 A 19891123 (198947)\* EN 23p

R: BE CH DE ES FR GB IT LI NL SE

WO 8910940 A 19891116 (198948) EN

RW: AT BE CH DE ES FR GB GR IT LI LU NL SE

W: AU DK FI HU JP KR

AU 8935718 A 19891129 (199007)

FI 9000187 A 19900112 (199012)

DK 9000108 A 19900312 (199035)

HU 53127 T 19900928 (199045)

JP 02504164 W 19901129 (199103)

IT 1219942 B 19900524 (199213)

US 5122598 A 19920616 (199227) 17p C08B037-08

HU 208440 B 19931028 (199348) C08B011-12

EP 342557 B1 19941123 (199445) EN 25p C08B011-12

R: AT BE CH DE ES FR GB GR IT LI LU NL SE

DE 68919435 E 19950105 (199506) C08B011-12

ES 2063779 T3 19950116 (199509) C08B011-12

CA 1336087 C 19950627 (199533) C08B011-08

EP 615979 A3 19941228 (199537)

US 5466461 A 19951114 (199551) 15p A61F013-15

IL 90273 A 19951127 (199608) C08B013-00

JP 2958373 B2 19991006 (199947) 19p C08B003-00

ADT EP 342557 A EP 1989-108729 19890512; WO 8910940 A WO 1989-EP520 19890512;

JP 02504164 W JP 1989-505459 19890512; IT 1219942 B IT 1988-47963

19880513; US 5122598 A US 1989-350920 19890512; HU 208440 B HU 1989-3005

19890512; WO 1989-EP520 19890512; EP 342557 B1 EP 1989-108628 19890512; DE

68919435 E DE 1989-619435 19890512; EP 1989-108628 19890512; ES 2063779 T3

EP 1989-108628 19890512; CA 1336087 C CA 1989-599556 19890512; EP 615979

A3 EP 1994-107393 19890512; US 5466461 A Div ex US 1989-350920 19890512;

US 1992-862370 19920402; IL 90273 A IL 1989-90273 19890512; JP 2958373 B2

JP 1989-505459 19890512, WO 1989-EP520 19890512

FDT HU 208440 B Previous Publ. HU 53127, Based on WO 8910940; DE 68919435 E

Based on EP 342557; ES 2063779 T3 Based on EP 342557; EP 615979 A3 Related

to EP 342557; US 5466461 A Div ex US 5122598; JP 2958373 B2 Previous Publ.

JP 02504164, Based on WO 8910940

PRAI IT 1988-47963 19880513

REP No-SR.Pub; DE 957938; EP 104467; EP 251905; US 3092619

IC ICM A61F013-15; C08B003-00; C08B011-08; C08B011-12; C08B013-00;  
C08B037-08  
ICS A61K007-48; A61K009-08; A61K009-14; A61K009-48; A61K031-72;  
A61K031-725; A61K047-00; A61K047-36; A61L017-00; A61L025-00;  
A61L031-00; C08B011-00; **C08B015-10**; C08B031-12; C08B031-16;  
C08B037-00

AB EP 342557 A UPAB: 19991207

Total or partial esters (I) of carboxymethyl cellulose (CMC), carboxymethyl starch (CMS) or carboxymethyl chitin (CMCH) with aliphatic, araliphatic, cycloaliphatic or heterocyclic alcohols, and salts of the partial esters with bases, are new, except for the partial esters (Ia) of CMC with ethylene glycol or propylene glycol and the partial esters (Ib) of CMS with MeOH or benzyl alcohol.

Also claimed is the use of (I), including (Ia) and (Ib), and their salts in the food industry, paper industry, adhesive prods., printing, textile dyeing prodn. of sanitary, medical and surgical articles, prodn. of (micro) capsules, immobilisation of enzymes, emulsifiers for glazes, polishes, antifoam agents, lactics (sic), and stabilisers in the ceramics and detergent industries.

USE - (I) may be used as active ingredients (when the alcohol or salt component is pharmacologically active) or carriers in pharmaceutical compsns. as cosmetic ingredients, for prodn. of sanitary or surgical threads, films or implants, as gelling agents and stabilisers in foods and drinks, etc. (Previously notified week 8947, reissued week 9007)

Dwg. 0/0

FS CPI GMPI

FA AB

MC CPI: A03-A04A1; A10-E07; A10-E08C; B04-C02; B12-L02; B12-M06; B12-M09;  
D03-H01N; D03-H01Q; D05-A01A1; D08-B03; D09-D; D11-B08; D11-B12;  
G02-A04A; G02-C; G03-B02A

ABEQ US 5122598 A UPAB: 19930923

Total and partial esters of (a) carboxymethyl **cellulose**, carboxymethyl starch or carboxymethyl chitin with (b) an aliphatic, araliphatic, cycloaliphatic or heterocyclic alcohol and their salts with (in)organic bases are new. Partial esters of **carboxymethylcellulose** with ethylene or propylene glycol and of carboxymethyl starch with methyl or benzyl alcohols are new.

USE - In cosmetics, biodegradable plastics for mfg. medical, surgical and sanitary articles and in pharmaceuticals. Salts of partial esters with amines chosen from alkaloids, peptides, phenothiazines, benzodiazepines, thioxanthenes, hormones, vitamins, anticonvulsants, antipsychotics, antiemetics, anaesthetics, hypnotics, anorexics, tranquillisers, muscle relaxants, coronary vasodilation, antineoplastics, antibiotics, **antibacterials**, antivirals, antimalarials, carbonic anhydroses **inhibitors**, non-steroidal, antiinflammations, vasoconstrictors, cholinergic agonists, cholinergic **blockers**, adrenergic agonists, adrenergic **blockers** and narcotic antagonists.

0/0

ABEQ EP 342557 B UPAB: 19950102

Total esters of acidic polysaccharides chosen from the group formed by **carboxymethylcellulose**, carboxymethyl starch and carboxymethylchitin wherein the carboxy groups of said polysaccharide are esterified with an alcohol of the aliphatic, araliphatic, cycloaliphatic and heterocyclic series, whereby the alcohols of the aliphatic series have a maximum of 34 carbon atoms and are unsubstituted or substituted by one or two functional groups chosen from the groups forms by amino, hydroxy, mercapto, aldehyde, keto, carboxy, hydrocarbyl and dihydrocarbylamino, ether, ester, thioether, thioester, acetal, ketal carbaloxy groups, carbamidic and substituted carbamidic groups by one or two alkyl groups with the hydrocarbyl radicals in these functionally modified groups having a maximum of 6 carbon atoms, and in which such alcohols of the aliphatic series may be interrupted in the carbon atom chain by heteroatoms chosen from the group formed by oxygen, sulfur and nitrogen, the alcohols of the araliphatic series are those with only one benzene residue and in which the aliphatic chain has a maximum of 4 carbon atoms and in which the benzene residue may be substituted by between 1 and 3 methyl or hydroxy

groups, by halogen atoms, and in which the aliphatic chain may be substituted by one or two functions chosen from the group formed by free amino or mono- or diethyl groups or by pyrrolidine or piperidien groups, and the alcohols of the cycloaliphatic or aliphaticcycloaliphatic or heterocyclic series respectively derive from mono- or polycyclic hydrocarbons with a maximum of 34 carbon atoms and are unsubstituted or substituted by one or more functional groups chosen from the group formed by amino, hydroxy, mercapto, aldehydo, keto, carboxy, hydrocarbyl and dihydrocarbylamino, ether, ester, thioether, thioester, acetal, ketal, carboxy, carbamidic and substituted carbamidic groups by one or two alkyl groups with the hydrocarbyl radicals in these functionally modified groups having a maximum of 6 carbon atoms, and which may be interrupted in the carbon atom chain by heteroatoms chosen from the group formed by -O-, -N-, -NH-, -S- and which may have one or more bonds, including aromatic structures.

Dwg.0/0

ABEQ US 5466461 A UPAB: 19951221

Sanitary or surgical articles contain new total or partial esters of acidic polysaccharides viz. **COOMecellulose**, COOMe starch, COOMechitin, and are prod. by esterifying a quat. ammonium salt of the acidic polysaccharide with up to 34C aliphatic alcohol, an araliphatic alcohol with 1 benzene ring on a 1-4C aliphatic chain, a cycloaliphatic or heterocyclic alcohol with up to 34C atoms, or salt of partial ester with base, with exceptions. The alcohols may be substd. or interrupted by heteroatoms. Articles include film, thread, skin, suture, capsules for implants, and microcapsules for subcutaneous, intramuscular or intravenous injection, solid inserts for subsequent removal, sponges, etc.

ADVANTAGE - Better than acidic polysaccharides now in common use.

Dwg.0/0

L144 ANSWER 6 OF 6 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1985-231029 [38] WPIDS

DNN N1985-173065 DNC C1985-100298

TI Copper salt modified cellulose fibres for hygienic applications - are adsorbent, deodorising and microbiocidal.

DC A11 A96 D22 F01 P21 P32 P34

IN MARINI, I; SUSTMANN, S

PA (CHES) CHEMIEFASER LENZING AG

CYC 14

PI DE 3408131 A 19850912 (198538)\* 16p

EP 159490 A 19851030 (198544) DE

R: AT BE CH DE FR GB IT LI LU NL SE

JP 60209066 A 19851021 (198548)

US 4637820 A 19870120 (198706)

CA 1240316 A 19880809 (198836)

ADT DE 3408131 A DE 1984-3408131 19840306; EP 159490 A EP 1980-102236

19800228; US 4637820 A US 1985-708139 19010101

PRAI DE 1984-3408131 19840306

REP No-SR.Pub

IC A01N025-10; A01N059-20; A41B013-02; A61F013-00; A61L015-00;

C08B015-05; D01F001-10; D01F002-24; D06M011-04; D06M016-00

AB DE 3408131 A UPAB: 19930925

Deodorant, microbiocidal, absorbent fibrous materials are produced from **cellulose** fibres modified with anionic salt-forming gps. contg.

bonded Cu. Gps. bonded to the O atom of the anhydro-lucose units of the **cellulose** fibre are of formula -PO<sub>3</sub>H(-), -(CH<sub>2</sub>)<sub>n</sub>PO<sub>3</sub>H(-),

-(CH<sub>2</sub>)<sub>n</sub>SO<sub>3</sub>(-) or -(CH<sub>2</sub>)<sub>n</sub>-COO(-) in which n = 1-3, and the deg. of substn. of the **cellulose** is sufficiently high to bond 0.1-3.0

wt.% Cu.

The fibres pref. have a pH of 4-5 and a water absorbtion of greater than 80%. Prodn. of the modified fibres is claimed by (i) treating anionic salt forming fibres with aq. CuII salt soln. pref. with a soln. of 1-20g/lCuSO<sub>4</sub>.5H<sub>2</sub>O with pH 4-5, for 1 minute without heating (ii) washing until salt (sulphate)-free, and air-drying.

USE/ADVANTAGE - The materials are fast-coloured blue depending in the amt. of Cu present giving an indication of the hygienic power.

**Bacteria** e.g. E-coli, Staphylococcus aureus, Candida albicans are **prevented** from multiplying under optimum conditions. The products develop no characteristic odour after 3 days incubation, and are esp. useful for medical, hygienic and aesthetic purposes e.g. wound dressings, sweat pads, diapers and other absorbent, single-use articles.

0/0

FS CPI GMPI

FA AB

MC CPI: A09-A; A10-E01; A12-V03A; D09-B; D09-C; F02-C01; F03-C02; F03-C02B; F04-C01; F04-E04

ABEQ US 4637820 A UPAB: 19930925

Modified fibrous material comprises viscose fibres modified by anionic gps. of formula  $-(CH_2)_n COOF$  attached through O to a viscose anhydroglucose unit. Some anionic gps. present are capped by Cu-cations. Viscose fibres bind 0.1-3.0 wt.% of Cu w.r.t. fibres; and n is 1-3.

Pref. degree of substitution by the anionic gp is 0.01-0.3 fibre has pH 4-5. Prod. has water retention capacity more than 80%. Carboxyalkyl anions are carboxymethyl.

USE - In medical, hygienic, cosmetic and aesthetic prods. which have deodorising and microbiostatic properties, for application to areas of the body where perspiration is heavy or where blood or urine are discharged.

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FILE 'JAPIO' ENTERED AT 16:35:37 ON 05 JUN 2000

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FILE 'JICST-EPLUS' ENTERED AT 16:35:37 ON 05 JUN 2000

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=> d his l145-

(FILE 'JAPIO, JICST-EPLUS' ENTERED AT 16:30:45 ON 05 JUN 2000)

L145 29480 S CELLULOS?  
 L146 2397 S L145 AND (BACTER? OR MICROORGAN? OR MICRO ORGAN? OR ACETOBACT  
 L147 2 S L145 AND (ATCC23769 OR ATCC (L) 23769 OR FERMBP4176 OR FERM(L  
 L148 137 S L145 AND (PASTERIAN? OR ACETI OR XYLIN? OR RANCEN? OR VENTRIC  
 L149 2402 S L146-L148  
 L150 0 S L149 AND (CELL (L) DIVI? (L) (INHIBIT? OR BLOCK? OR PREVENT?)  
 L151 14 S L36-L49 AND L149  
 L152 7 S (TETRACYCLIN? OR ERYTHROMYCIN? OR THIENAMYCIN?) AND L149  
 L153 14 S L151, L152  
 L154 2 S L153 AND MICROBIAL/TI  
 L155 1 S L154 NOT CLINICAL

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L155 ANSWER 1 OF 1 JAPIO COPYRIGHT 2000 JPO

AN 1998-298204 JAPIO

TI MODIFIED **MICROBIAL CELLULOSE**

IN ISHIHARA MASARU; YAMANAKA SHIGERU

PA AJINOMOTO CO INC, JP (CO 000006)

PI JP 10298204 A 19981110 Heisei

AI JP1997-214065 (JP09214065 Heisei) 19970724

SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 98, No. 11

IC ICM (6) C08B037-00

ICS (6) C08B015-00

AB PURPOSE: TO BE SOLVED: To obtain a high-modulus **bacterial cellulose** comprising ribbonlike microfibrils changed in length by cultivating **bacteria** capable of producing **cellulose**

outside the cell in a culture medium containing a cytostatic agent or an organic reducing agent.

CONSTITUTION: eria capable of producing **cellulose** outside the cell, comprising, e.g. **Acetobacter.cntdot.Pasteurianus** ATcc23769, or FERMBP-4176, are inoculated in a culture medium containing a cytostatic agent comprising, e.g. a **chloramphenicol** antibiotic, a protein synthesis inhibitor, or an organic compound having a .beta.-lactase inhibitory action, or an organic reducing agent comprising, e.g. dithiothreitol or 2-mercaptoethanol for culturing at a pH of 3 to 9, at 10-40.degree.C for 1 to 100 days, and the produced **cellulose** is taken to give a **bacterial cellulose** containing ribbonlike microfibrils having a width of 10-100 nm and a length of 160-1,000 nm, preferably 50-70 nm.

=> d his 1156-

(FILE 'JAPIO, JICST-EPLUS' ENTERED AT 16:35:37 ON 05 JUN 2000)

L156	48 SS L149 AND (MICROFIBRIL? OR MICROFIBER? OR MICROFIBR? OR MICRO
L157	47 S L156 NOT L155
L158	0 S L157 AND (ANTIBIOTIC OR ANTIBACTER? OR LACTAMASE OR PROTEIN(L